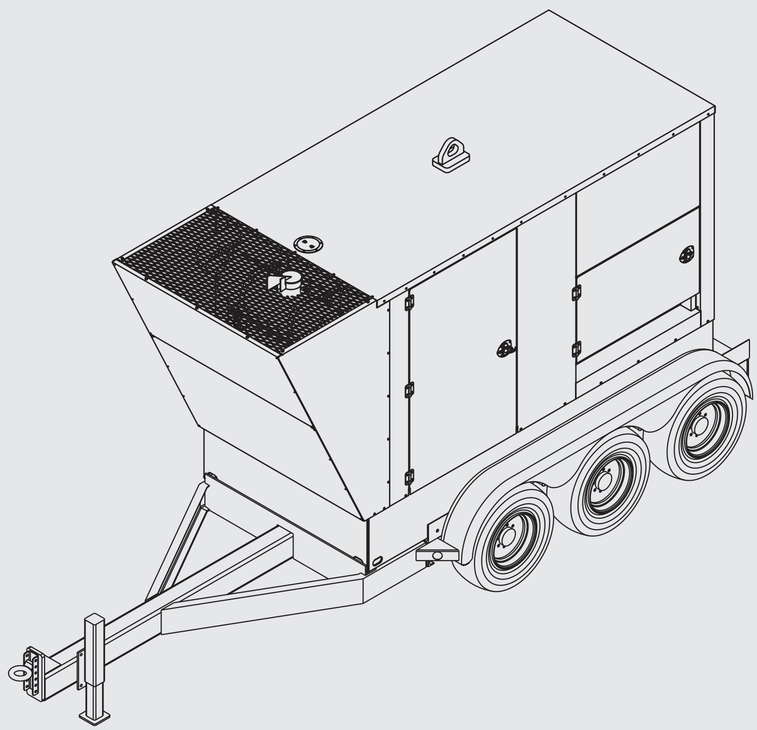
TEREX®

Service & Parts Manual

T360



First Edition

First Printing

Part No. 833019

July 2007

TEREX

Introduction

Important

Read, understand and obey the safety rules and operating instructions in the appropriate Operator's Manual on your machine before attempting any maintenance procedure.

Basic mechanical, hydraulic and electrical skills are required to perform most procedures. However, several procedures require specialized skills, tools, lifting equipment and a suitable workshop. In these instances, we strongly recommend that maintenance and repair be performed at an authorized TEREX dealer service center.

Technical Publications

TEREX Corporation has endeavored to deliver the highest degree of accuracy possible. However, continuous improvement of our products is a TEREX policy. Therefore, product specifications are subject to change without notice.

Readers are encouraged to notify TEREX of errors and send in suggestions for improvement. All communications will be carefully considered for future printings of this and all other manuals.

Serial Number Information

TEREX Corporation offers the following manuals for these models:

Title	Part No.
TEREX T360 Operator's Manual, First Edition	133005
TEREX T360 Service & Parts Manual, First Edition	833019
Newage Generator Manual	836430
Cummins Engine Manual	125558
Cascade Controller Manual	833011
Dexter Axle Manual	833014

Contact Us:

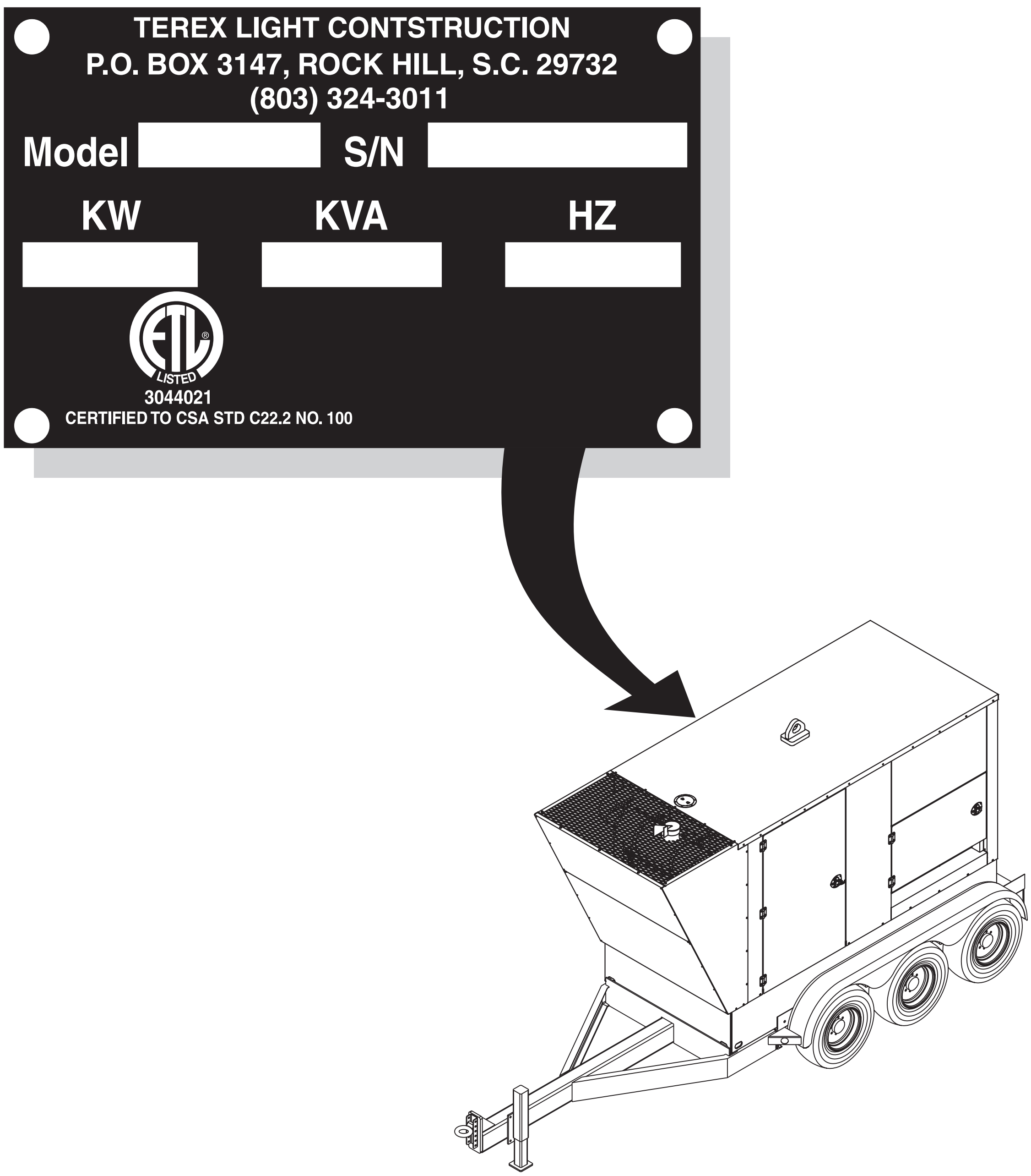
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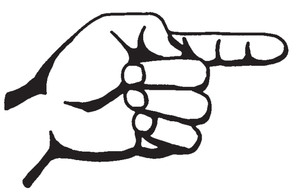
833019 Rev A July 2007
First Edition, First Printing

How to Read Your Serial Number

Serial Number Legend

The serial number plate on your T360 Super Quiet Generator is located on the twist lock area of the lower control panel.





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TEREX

Safety Rules

Danger

Failure to obey the instructions and safety rules in this manual and the appropriate Operator's Manual on your machine will result in death or serious injury.

Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

☑ You are trained and qualified to perform maintenance on this machine.

☑ You read, understand and obey:
- manufacturer's instructions and safety rules
- employer's safety rules and worksite regulations
- applicable governmental regulations

☑ You have the appropriate tools, lifting equipment and a suitable workshop.

SAFETY RULES

Personal Safety

Any person working on or around a machine must be aware of all known safety hazards. Personal safety and the continued safe operation of the machine should be your top priority.



Read each procedure thoroughly. This manual and the decals on the machine, use signal words to identify the following:



Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

NOTICE Indicates a potentially hazardous situation which, if not avoided, may result in property damage.



Be sure to wear protective eye wear and other protective clothing if the situation warrants it.



Be aware of potential crushing hazards such as moving parts, free swinging or unsecured components when lifting or placing loads. Always wear approved steel-toed shoes.

Workplace Safety



Be sure to keep sparks, flames and lighted tobacco away from flammable and combustible materials like battery gases and engine fuels. Always have an approved fire extinguisher within easy reach.



Be sure that all tools and working areas are properly maintained and ready for use. Keep work surfaces clean and free of debris that could get into machine components and cause damage.



Be sure any forklift, overhead crane or other lifting or supporting device is fully capable of supporting and stabilizing the weight to be lifted. Use only chains or straps that are in good condition and of ample capacity.



Be sure that fasteners intended for one time use (i.e., cotter pins and self-locking nuts) are not reused. These components may fail if they are used a second time.



Be sure to properly dispose of old oil or other fluids. Use an approved container. Please be environmentally safe.



Be sure that your workshop or work area is properly ventilated and well lit.

TEREX

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TEREX

Parts Stocking List

Required Parts

The following parts are required to perform maintenance procedures as outlined in the *TEREX T360 Parts and Service Manual.*

Description	Part No.
Cummins QSM11G4 Models	
Oil Filter	125550
Air Filter - Primary	125561
Air Filter - Secondary	125562
Fuel Filter	125551
Belt	125552

How To Order Parts

Please be prepared with the following information when ordering replacement parts for your TEREX product:

- ☑ Machine model number
- ☑ Machine serial number
- ☑ Terex part number
- ☑ Part description and quantity
- ☑ Purchase order number
- ☑ "Ship to" address
- ☑ Desired method of shipment
- ☑ Name and telephone number of the authorized TEREX Distributor in your area

Use the Service Parts Fax Order Form on the next page and fax your order to our Parts Department.

If you don't know the name of your authorized distributor, or if your area is not currently serviced by an authorized distributor, please call TEREX Corporation.

TEREX North America
Telephone (803) 324-3011
Toll Free (800) 433-3026 in U.S.A. and Canada
Fax (803) 366-1101

Machine Information

Model

Serial Number

Date of Purchase

Authorized TEREX Distributor

Phone Number

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TEREX

Service Parts fax Order Form

FAX TO: (800) 633-5534 OR TOLL FREE: 800-433-3026

Please fill out completely

Date ______________________ Account Number ______________________

Your Name ______________________ **Your Fax Number** ______________________

______________________ Your Phone Number ______________________

Bill To ______________________ Ship To ______________________

______________________ ______________________

______________________ ______________________

______________________ ______________________

Purchase Order Number ______________________ Ship Via ______________________

Model(s) ______________________ **Serial No.(s)** ______________________

Optional Equipment ______________________

Part Number	Description	Quantity	Price

All backordered parts will be shipped when available via the same ship method as the original order unless noted below:

- o Ship complete order only - no backorders
- o Ship all available parts and contact customer on disposition of backordered parts
- o Other (please specify)

FOR TEREX USE ONLY

Order Number ______________ Origin Code ______________ Comments ______________

Date Scheduled ______________ Ship Condition ______________ ______________

Order Total ______________ Terms Code ______________ ______________

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Specifications

REV A

System Power Output	
Prime 3 Phase Power	288 kW
Prime 3 Phase kVA	360 kVA
Available 3 Phase Voltage	208 / 220 / 240 / 440 / 480
Associated 3 Phase Amps (0.8 power factor)	999 / 945 / 866 / 472 / 433
Prime 1 Phase Power	160kW
Prime 1 Phase kVA	160 kVA
Available 1 Phase Voltage	120 / 240
Associated 1 Phase Amps (1.0 power factor)	1333 / 667
Max Amp Rating (Main Breaker Size)	1200 A

Engine Specs	
Manufacturer	Cummins
Model	QSM11-G4
Horsepower - Prime (1800 rpm)	426 hp (318 kWm)
Description	6-Cyl., 4 Cycle, Water Cooled, OHV, In-Line, Direct Inj.
Bore & Stroke	4.92 x 5.79 in. (125mm x 170mm)
Piston Displacement	661 cu. In (10.8 L)
Compression Ratio	16.3 : 1
Exhaust System	Critical Grade Silencer
Monitoring Gauges	Oil Press., Water Temp., Fuel Level, Battery Voltage, Hours

Engine Cooling System	
Coolant Capacity - engine only	2.5 gal (9.5 L)
Cooling System	Liquid Cooled - Air to Air CAC - Rated to 105° F Ambient

Fuel System		
Fuel Specification		#2 Diesel
Fuel Filter		Fuel/Water Separator
Fuel Capacity		400 gal (1514 L)
Fuel Tank and Containment		Internal Fuel Tank with Fluid Spills Containment
Fuel Consumption (Run Time)	Full Load	20.7 gal/hr (78 L/hr) 19 hr
	3/4 Load	15.5 gal/hr (59 L/hr) 25.8 hr
	Half Load	10.6 gal/hr (40 L/hr) 37.7 hr

SPECIFICATIONS REV A

Generator Specs	
Rating (0.8 power factor)	352 kW 3 Phase @ 480/240V
Description	Brushless, 4 Pole, Synchronous, Single Bearing
Insulation	Class H
Temperature Rating	125° C Rise Over 40° C Ambient
Automatic Voltage Regulator	External, Solid State, Adjustable
Voltage Regulation	+/- 1%
Frequency (Speed)	60 Hertz (1800 RPM)

System Controls	
Governor	ECM Controlled
Protection (Safety Shutdowns)	Low Oil Pressure, High Water Temperature
	Overcrank, Overspeed, Underspeed
Generator Gauges	Voltmeter, Ammeter, Hertz Meter

Distribution	
Receptacles, 120 V	2 Each 20 Amp GFCI Duplex
Receptacles, 240 V	3 Each 50 Amp Tempower T/L
Primary Distribution	5 Lug Terminals with Mainline Circuit Breaker

Packaging	
Enclosure	Sound Attenuated, Weatherproof with Lockable Doors
Sound Levels	72 dBA at 23 ft. (7 meters)
Lifting System	Roof Mounted, Single Point
Weight Empty (No Trailer)	10450 lb. (4740 kg)
Weight Full (No Trailer)	13227 lb. (6000 kg)
Dimensions - L x W x H (No Trailer)	165 x 62 x 94 in. (419 x 157 x 2394 cm)
Weight Empty with Trailer	13120 lb. (5964 kg)
Weight Full with Trailer	15890 lb. (7223 kg)
Dimensions - L x W x H with Trailer	230 x 88 x 114 in. (584 x 224 x 290 cm)

SAE FASTENER TORQUE CHART

• This chart is to be used as a guide only unless noted elsewhere in this manual •

SIZE	THREAD	Grade 5				Grade 8				A574 High Strength Black Oxide Bolts	
		LUBED		DRY		LUBED		DRY		LUBED	
		in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
1/4	20	100	11.3	80	9	140	15.8	110	12.4	130	14.7
	28	90	10.1	120	13.5	120	13.5	160	18	140	15.8
		LUBED		DRY		LUBED		DRY		LUBED	
		ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm
5/16	18	13	17.6	17	23	18	24	25	33.9	21	28.4
	24	14	19	19	25.7	20	27.1	27	36.6	24	32.5
3/8	16	23	31.2	31	42	33	44.7	44	59.6	38	51.5
	24	26	35.2	35	47.4	37	50.1	49	66.4	43	58.3
7/16	14	37	50.1	49	66.4	50	67.8	70	94.7	61	82.7
	20	41	55.5	55	74.5	60	81.3	80	108.4	68	92.1
1/2	13	57	77.3	75	101.6	80	108.4	110	149	93	126
	20	64	86.7	85	115	90	122	120	162	105	142
9/16	12	80	108.4	110	149	120	162	150	203	130	176
	18	90	122	120	162	130	176	170	230	140	189
5/8	11	110	149	150	203	160	217	210	284	180	244
	18	130	176	170	230	180	244	240	325	200	271
3/4	10	200	271	270	366	280	379	380	515	320	433
	16	220	298	300	406	310	420	420	569	350	474
7/8	9	320	433	430	583	450	610	610	827	510	691
	14	350	474	470	637	500	678	670	908	560	759
1	8	480	650	640	867	680	922	910	1233	770	1044
	12	530	718	710	962	750	1016	990	1342	840	1139
1.125	7	590	800	790	1071	970	1315	1290	1749	1090	1477
	12	670	908	890	1206	1080	1464	1440	1952	1220	1654
1.25	7	840	1138	1120	1518	1360	1844	1820	2467	1530	2074
	12	930	1260	1240	1681	1510	2047	2010	2725	1700	2304
1.5	6	1460	1979	1950	2643	2370	3213	3160	4284	2670	3620
	12	1640	2223	2190	2969	2670	3620	3560	4826	3000	4067

METRIC FASTENER TORQUE CHART

• This chart is to be used as a guide only unless noted elsewhere in this manual •

Size (mm)	Class 4.6				Class 8.8				Class 10.9				Class 12.9			
	LUBED		DRY		LUBED		DRY		LUBED		DRY		LUBED		DRY	
	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
5	16	1.8	21	2.4	41	4.63	54	6.18	58	6.63	78	8.84	68	7.75	91	10.3
6	19	3.05	36	4.07	69	7.87	93	10.5	100	11.3	132	15	116	13.2	155	17.6
7	45	5.12	60	6.83	116	13.2	155	17.6	167	18.9	223	25.2	1.95	22.1	260	29.4
	LUBED		DRY		LUBED		DRY		LUBED		DRY		LUBED		DRY	
	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm
8	5.4	7.41	7.2	9.88	14	19.1	18.8	25.5	20.1	27.3	26.9	36.5	23.6	32	31.4	42.6
10	10.8	14.7	14.4	19.6	27.9	37.8	37.2	50.5	39.9	54.1	53.2	72.2	46.7	63.3	62.3	84.4
12	18.9	25.6	25.1	34.1	48.6	66	64.9	88	69.7	94.5	92.2	125	81	110	108	147
14	30.1	40.8	40	54.3	77.4	105	103	140	110	150	147	200	129	175	172	234
16	46.9	63.6	62.5	84.8	125	170	166	226	173	235	230	313	202	274	269	365
18	64.5	87.5	86.2	117	171	233	229	311	238	323	317	430	278	377	371	503
20	91	124	121	165	243	330	325	441	337	458	450	610	394	535	525	713
22	124	169	166	225	331	450	442	600	458	622	612	830	536	727	715	970
24	157	214	210	285	420	570	562	762	583	791	778	1055	682	925	909	1233

GENERATOR TORQUE SPECIFICATIONS

Generator	**FT*LB**
Flex Plate to Flywheel	70
Generator Case to Bellhousing	45
5/8-11" Socket Head Cap Screws for Lifting Channel	190
1/2-13" Hex Head Screws for Lifting Channel	70
Genset Isolators	70

Scheduled Maintenance Procedures

Observe and Obey:

☑ Maintenance inspections shall be completed by a person trained and qualified on the maintenance of this machine.

☑ Scheduled maintenance inspections shall be completed as specified using the supplied *Lubrication and Maintenance Service Interval Charts* provided in this section.

⚠WARNING Failure to perform each procedure as presented and scheduled could result in death, serious injury or substantial damage.

☑ Immediately tag and remove from service a damaged or malfunctioning machine.

☑ Repair any machine damage or malfunction before operating the machine.

☑ Keep records on all inspections for three years.

☑ Machines that have been out of service for a period longer than 3 months must complete the quarterly inspection.

☑ Unless otherwise specified, perform each maintenance procedure with the machine in the following configuration:

- Machine parked on a firm, level surface
- Toggle switch in the **"OFF"** position
- Wheels chocked

About This Section

This section contains detailed procedures for each scheduled maintenance inspection.

Each procedure includes a description, safety warnings and step-by-step instructions.

Symbols Legend

⚠ Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠DANGER Used to indicate the presence of an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠WARNING Used to indicate the presence of a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠CAUTION Used to indicate the presence of a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

NOTICE Used to indicate operation or maintenance information.

⊙ Indicates that a specific result is expected after performing a series of steps.

⊗ Indicates that an incorrect result has occurred after performing a series of steps.

Pre-Delivery Preparation

Fundamentals

It is the responsibility of the dealer to perform the Pre-delivery Preparation.

The Pre-delivery Preparation is performed prior to each delivery. The inspection is designed to discover if anything is apparently wrong with a machine before it is put into service.

A damaged or modified machine must never be used. If damage or any variation from factory delivered condition is discovered, the machine must be tagged and removed from service.

Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications.

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications and the requirements listed in the responsibilities manual.

Instructions

Use the operator's manual on your machine.

The Pre-delivery Preparation consists of completing the Pre-operation Inspection, the Maintenance items and the Function Tests.

Use this form to record the results. Place a check in the appropriate box after each part is completed. Follow the instructions in the operator's manual.

If any inspection receives an N, remove the machine from service, repair and re-inspect it. After repair, place a check in the R box.

Legend
Y = yes, completed
N = no, unable to complete
R = repaired

Comments

Pre-Delivery Preparation	Y	N	R
Pre-operation inspection completed			
Maintenance items completed			
Function tests completed			

Model

Serial number

Date

Machine owner

Inspected by (print)

Inspector signature

Inspector title

Inspector company

TEREX

TEREX North America
P.O. BOX 3147
Rock Hill, SC 29732 USA
Toll Free (800) 433-3026 in U.S.A. and Canada

Maintenance Schedules

REV A

CUMMINS LUBRICATION AND MAINTENANCE SERVICE INTERVALS

ITEM	DAILY	50 Hrs or Wkly	500 Hrs or 12 Mths	1000 Hrs	2000 Hrs
Inspect, adjust or replace alternator or fan belt	•				
Check cooling system coolant level	•				
Check driven equipment	•				
Inspect engine air cleaner service indicator	•				
Check engine oil level	•				
Drain fuel system primary filter/water separator	•				
Walk around inspection	•				
Drain tank water and sediment		•			
Check battery electrolyte level			•		
Clean/replace engine air cleaner element			•		
Inspect/clean engine ground			•		
Change engine oil and filter			•		
Replace water separator element			•		
Replace fuel system secondary filter			•		
Inspect/replace hoses and clamps			•		
Inspect/adjust engine valve lash				•	
Inspect aftercooler core					•
Inspect alternator					•
Inspect engine mounts					•
Inspect starting motor					•
Inspect turbocharger					•
Inspect water pump					•

ITEM	2 Yrs	3000 Hrs	3000 Hrs or 2 Yrs	4000 Hrs	6000 Hrs or 3 Yrs	12000 Hrs or 6 Yrs
Change cooling system coolant	•					
Test/change fuel injector		•				
Change cooling system coolant						
(commercial heavy duty)			•			
Clean/test aftercooler core				•		
Add cooling system coolant extender (ELC)					•	
Change cooling system coolant (ELC)						•

MAINTENANCE SCHEDULES CONTINUED
REV A

NEWAGE GENERATORS MAINTENANCE SCHEDULE

ITEM	DAILY	250 Hours or 3 Months	1500 Hours or 12 Months	4500 Hours or 3 Years	15000 Hours or 19 Years
Visual inspection	•				
Visual inspection plus running audible check		•			
Measure stator winding insulation resistance and record			•		
Monitor bearing/s condition			•		
Remove terminal box lid and check connections			•		
Re-grease bearings				•	
Measure vibration levels					•
Replace bearing/s					•
Replace NDE o-ring					•
Inspect bearing housings					•
Inspect winding conditions					•
Inspect rotating diode assembly					•

*Refer to the manufacturers manuals for detailed maintence intervals and instructions. If the information in the manufacturer's manual differs from that in this manual the manufacturer's manual should take precedence.

Troubleshooting

Observe and Obey:

☑ Troubleshooting and repair procedures shall be completed by a person trained and qualified on the repair of this machine.

☑ Immediately tag and remove from service a damaged or malfunctioning machine.

☑ Repair any machine damage or malfunction before operating the machine.

☑ Unless otherwise specified, perform each repair procedure with the machine in the following configuration:

- Machine parked on a firm, level surface.
- Wheels chocked.
- Toggle switch in "OFF" position.

Before Troubleshooting:

☑ Read, understand and obey the safety rules and operating instructions in the appropriate operator's manual on your machine.

☑ Be sure that all necessary tools and test equipment are available and ready for use.

☑ Be aware of the following hazards and follow generally accepted safe workshop practices.

DANGER Electrocution hazard. Exposure to electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

DANGER Electrocution hazard. Attempting to sevice the machine before the capacitors are fully discharged will result in death or serious injury.

DANGER High voltage. Exposure to electrical wires or electrical current will result in death or serious injury. Remove all rings, watches and other jewelry. Turn off all power when not needed for testing. Use extreme caution when working with high voltage electrical components.

CAUTION Burn hazard. Contact with hot engine components may cause severe burns. Use caution when working around a hot engine.

Troubleshooting Guide

The engine/generator set is tested and set at the factory for proper operation in the field. These units should never require additional adjustments in the field. If needed, adjustments should only be made by a qualified service technician, otherwise the manufacturer's warranty may become void.

FAULT	POSSIBLE CAUSE	SOLUTION
No generator output voltage	Circuit breaker tripped	Reset circuit breaker
	Voltage regulator	Check voltage regulator wiring
	Defective voltage regulator	Replace voltage regulator
	Defective Selector Switch	By pass by hardwiring generator
	Defective generator	Refer to generator manual
Low generator output voltage	Voltage adjustment set too low	Adjust voltage potentiometer
	Defective potentiometer	By pass or replace
	Low engine speed	Call TEREX Service
	Loose wire on voltage selector switch	Check wiring
	Fluctuating or surging engine speed	Check engine fuel, oil, and air filters
	Loose wire on voltage regulator sensing circuit	Check wiring
	Defective voltage regulator	Replace voltage regulator
High generator output voltage	Voltage adjustment potentiometer	Adjust potentiometer
	High engine speed	Call TEREX Service

TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	SOLUTION
High generator output voltage	Defective automatic voltage regulator	Replace voltage regulator
	Loose wire on voltage adjustment potentiometer	Check wiring
	Neutral binding strap not in place.	Install neutral binding strap
Fluctuating generator output voltage	An “ON/OFF” type load may be the cause	Redistribute load if possible
	Fluctuating or surging engine speed	Check engine fuel, oil, and air filters
	Loose wiring in generator	Check connections
	Automatic voltage regulator stability setting may be wrong	Call TEREX Service
	Loose wire on the automatic voltage regulator sensing lead	Check wiring
Low engine speed	Engine speed adjustment has slipped	Call TEREX Service
	Clogged fuel system	Check for air leaks, clogged fuel filter, kinked fuel line, or clogged fuel pick-up tube
	Blocked air intake	Check air filter
	Blocked exhaust system	Check engine exhaust system, remove obstructions
	Contaminated fuel	Check fuel/water separator and fuel tank for contamination. Replace fuel if needed
	Defective governor on engine	Call TEREX Service

TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	SOLUTION
Low Speed	Defective injectors on engine	Have injectors checked by a qualified technician
	"Surging" engine speed	Check engine fuel, oil, and air filters
Engine turns over (cranks), but won't run	Unit out of fuel	Check fuel level in tank, fill as needed
	Loose or broken wire in control circuit fuel injection pump solenoid	Check wiring to verify 12V DC is being supplied to the pump solenoid
	Defective solenoid	Replace solenoid
	Clogged fuel system	Check fuel system
	Air in fuel system	"Bleed" fuel system
	Defective fuel pump	Check and replace if defective
	Clogged air intake	Check air cleaner
	Clogged exhaust	Check exhaust system
	Contaminated fuel	Check fuel/water separator and tank for contamination
	Defective injectors	Have injection system checked by a trained technician
	Lost engine compression	Have compression checked by a trained technician
Engine won't crank	Loose battery cable or discharged battery	Check cables and battery electrolyte level. Recharge as necessary

TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	SOLUTION
Engine won't crank	Engine "ON/OFF" switch set in "OFF" position	Check switch position
	Blown fuse in DC control circuit	Replace with 25 Amp. SLO-BLO TYPE fuse if needed.
	E-Stop	Check to see if engaged
	Defective starter solenoid	Replace solenoid
	Defective starter	Replace starter
	Seized engine	Have engine checked by a qualified technician
Engine runs, but loses speed	Unit is overloaded	Reduce load
	Improper connection	Check or Call TEREX Service
Engine runs, but loses power under load	Clogged fuel system	Check fuel system air in fuel lines
	Blocked air intake	Check air cleaner
	Blocked exhaust	Check exhaust system
	Contaminated fuel	Check fuel/water separator and fuel tank for contamination
	Faulty governor, defective injectors, or defective fuel pump	Have unit checked by a trained service technician for all of these items
Engine shuts down automatically and TROUBLE LIGHT on CONTROL PANEL is illuminated	Oil Pressure Switch	Not opening
	Improper coolant or water mixture	Use a 50/50 on mix of water and anti-freeze only

TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	SOLUTION
Engine shuts down automatically and TROUBLE LIGHT on CONTROL PANEL is illuminated	Overloaded engine	Reduce load
	Broken fan belt	Inspect fan belt and replace as needed
	Defective thermostat or thermocouple switch	Inspect thermostat switch
	Defective water pump	Inspect water pump and replace if needed
	Blocked cooling air inlet or exhaust	Inspect and remove any obstructions
	Defective or grounded temperature switch	Inspect switch and repair or replace
	Defective injectors or injector pump	Have the engine inspected by a trained service technician
	Defective oil pump	Have the engine inspected by a trained service technician
	Defective or grounded oil pressure switch	Inspect switch and repair or replace

IF YOU FEEL AN ELECTRIC SHOCK AT ANY TIME WHILE OPERATING THIS UNIT, SHUT IT DOWN IMMEDIATELY! HAVE THE UNIT INSPECTED BY A TRAINED ELECTRICIAN.

THIS ENGINE/GENERATOR SET IS FACTORY INSTALLED, TESTED, AND SET FOR FIELD OPERATION. ANY DAMAGE TO THE ENGINE OR GENERATOR UNITS OCCURRING AFTER ADJUSTMENTS ARE MADE IN THE FIELD BY UNAUTHORIZED PERSONNEL WILL NOT BE COVERED BY YOUR MANUFACTURER'S WARRANTY AND WILL ALSO VOID THE MANUFACTURER'S WARRANTY ON THIS PARTICULAR UNIT. IF YOU CAN NOT REACH YOUR LOCAL DEALER, CONTACT THE FACTORY SERVICE MANAGER TOLL FREE AT 1-800-433-3026.

Electrical Troubleshooting

5 Components that cause voltage related problems

Potentiometer

Connects to voltage regulator. Bypass potentiometer by unplugging from voltage regulator and installing jumper on 2 male spades on regulator.

Voltage Regulator

(Located inside the generator rear housing.)

Measure DC voltage at F1 & F2. Normal voltage is 10 to 12 V DC. Remove 2 wires marked (F1, X)(F2, X X) from voltage regulator. Connect wire marked F1 to positive and F2 to negative of a 12 volt battery. Start unit and measure voltage. If unit produces close to maximum output, replace Automatic Voltage Regulator.

Voltage Selector Switch

The correct way to test is to disconnect from generator and hard wire the generator into one configuration. This will eliminate the switch from the circuit and verify that the generator is functioning properly. All contacts should be checked following the proper schematic with the switch disconnected from the generator set. Actual loads can cause failures in contacts that cannot be duplicated using a meter.

Overcurrent Relay

This device causes the 3-phase breaker to trip that supplies AC power to the distribution lugs if uneven or excessive current is measured at the distribution lugs. It is also connected to the 3-phase door switch and will automatically trip the 3-phase breaker when the door is open and prevents the breaker from being reset while it is open.

Generator

Test resistance of field, stator and exciter windings. Contact **TEREX** for procedures or repair facility recommended by generator manufacturer.

⚠ Procedure for testing generator with no output

THIS EQUIPMENT USES HIGH VOLTAGE CIRCUITS CAPABLE OF CAUSING SERIOUS INJURY OR DEATH! EXCERCISE EXTREME CAUTION AROUND ANY ELECTRICAL COMPONENT WHEN OPERATING THIS UNIT.

IT IS ESSENTIAL THAT ALL TEST INSTRUMENTS ARE REGULARLY CHECKED FOR SAFETY, AND ANY CONNECTION LEADS, PROBES, OR CLIPS, ARE CHECKED TO ENSURE THAT THEY ARE SUITABLE FOR THE VOLTAGE LEVELS BEING TESTED.

NEVER ATTEMPT TO TEST A "LIVE" GENERATOR UNLESS THERE IS ANOTHER COMPETENT PERSON PRESENT WHO CAN SWITCH OFF THE POWER SUPPLY OR SHUT DOWN THE ENGINE IN AN EMERGENCY.

NEVER EXPOSE "LIVE" CONNECTIONS UNLESS YOU HAVE CREATED A SAFE WORKING AREA AROUND YOU. MAKE SURE YOU HAVE MADE ALL OTHER PERSONS IN THE IMMEDIATE AREA FULLY AWARE OF WHAT YOU ARE DOING.

- When a new generator is not producing voltage, the testing or wiring personnel should first verify that the unit is wired correctly! The stack switch and generator leads should all be checked as well as the breaker and sensing leads. If the unit was not wired correctly and you flashed the generator, you could burn up the unit. (**Do not forget to check the sensing leads!**).

TROUBLESHOOTING

Procedure for testing generator with no output (cont.)

- After performing the initial checks above, remove the field wires from the voltage regulator (F1 or X is positive and F2 or XX is negative). Connect the battery + to the F1 or X wire and battery - to the F2 or XX wire. Start the engine and check for the rated voltage. **Hooking this up incorrectly will reverse polarity and could damage the voltage regulator and /or generator end.** This check should correct any voltage problems. If your voltage does not come up to the rated voltage, this indicates an internal problem with the generator end. The output should be close to proper voltage. Also, if the unit comes up to voltage, check for even reading across the lines if they are not this would mean you probably have a problem with the wiring of the switch or generator. If the generator voltage reads correctly you know there is not a problem with the generator end. Your problem is more than likely with the voltage regulator. In this case, you should contact the **TEREX** service department.

- If the voltage is uneven between the legs when you apply 24 volts to the field wires you need to recheck your wiring connections. **(If you can not find the problem hard wire the generator!)** After you have the field wire connected start the unit again and check your output voltage. It may still be necessary to flash the fields to restore residual voltage. This needs to be done with the unit off and the field wires removed. **(Do not flash the regulator, flash the field wires)**

- As with any electrical device use extreme caution when working around a running generator it could cost you your life. Observe proper polarity when working with the regulator so you don't break something that is not broken to begin with, and if you are ever in doubt, ask.

INSTALLATION AND ANY WORK PERFORMED ON THIS UNIT SHOULD BE DONE ONLY BY A QUALIFIED ELECTRICIAN.

Procedure for changing the voltage potentiometer

THIS EQUIPMENT USES HIGH VOLTAGE CIRCUITS CAPABLE OF CAUSING SERIOUS INJURY OR DEATH! EXCERCISE EXTREME CAUTION AROUND ANY ELECTRICAL COMPONENT WHEN OPERATING THIS UNIT.

INSTALLATION AND ANY WORK PERFORMED ON THIS UNIT SHOULD BE DONE ONLY BY A QUALIFIED ELECTRICIAN.

- Make sure generator is turned off and e-stop is engaged before opening control panel.
- Locate the two wires going to the back of the potentiometer. Both wires will be white with a red stripe.
- Disconnect both wires.
- Once the wires are loose, go to the front of the control panel and loosen the lock nut holding the potentiometer.
- Put the new potentiometer in its place and retighten lock nut.
- Reattach the disconnected wires that were disconnected in step 3.
- After completing the installation of the new potentiometer go back and check all connections to make sure everything is tight and that no connections are loose, this includes all other wiring on the back of the control panel and on the inside of the control box.
- You should now be able to restart the generator and check for proper operation.

If any further adjustment is needed to the voltage of the generator please call **TEREX** at 1-800-433-3026 for assistance.

Schematics

REV A

Observe and Obey:

☑ Troubleshooting and repair procedures shall be completed by a person trained and qualified on the repair of this machine.

☑ Immediately tag and remove from service a damaged or malfunctioning machine.

☑ Repair any machine damage or malfunction before operating the machine.

Before Troubleshooting:

☑ Read, understand and obey the safety rules and operating instructions in the appropriate operator's manual on your machine.

☑ Be sure that all necessary tools and test equipment are available and ready for use.

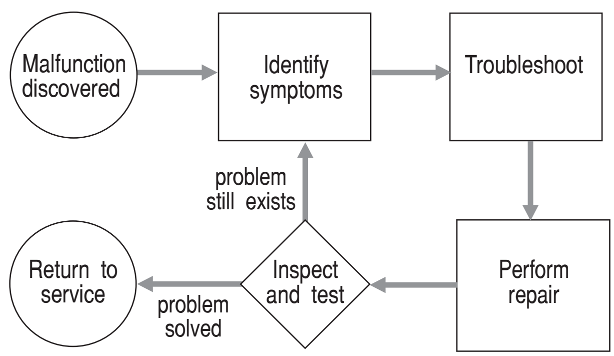
About This Section

There are two groups of schematics in this section. An illustration legend precedes each group of drawings.

Electrical Schematics

⚠WARNING Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

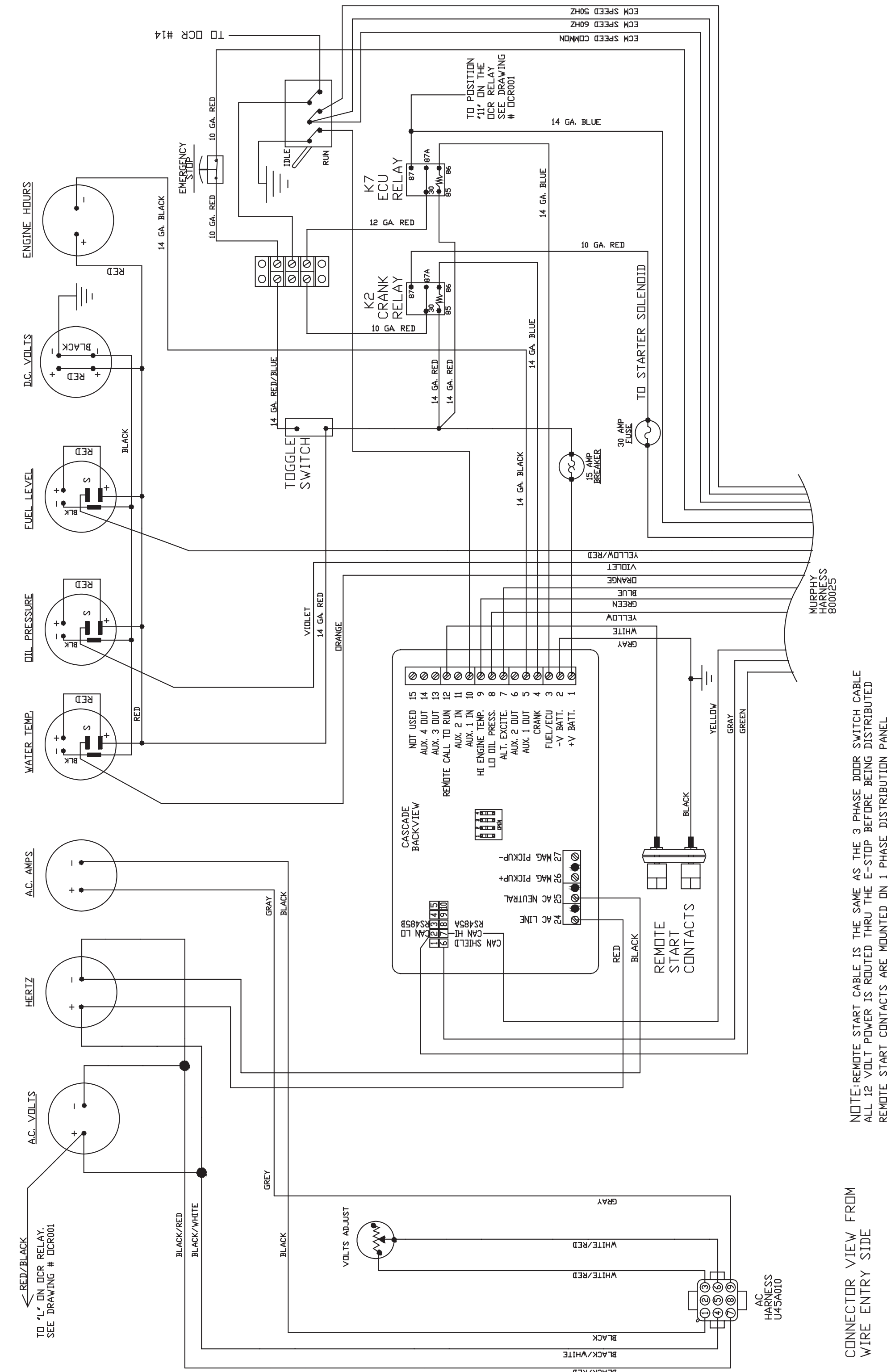
General Repair Process



Control Panel Wiring

for Murphy Cascade Controller
Drawing #ES100029 (Standard)

REV A

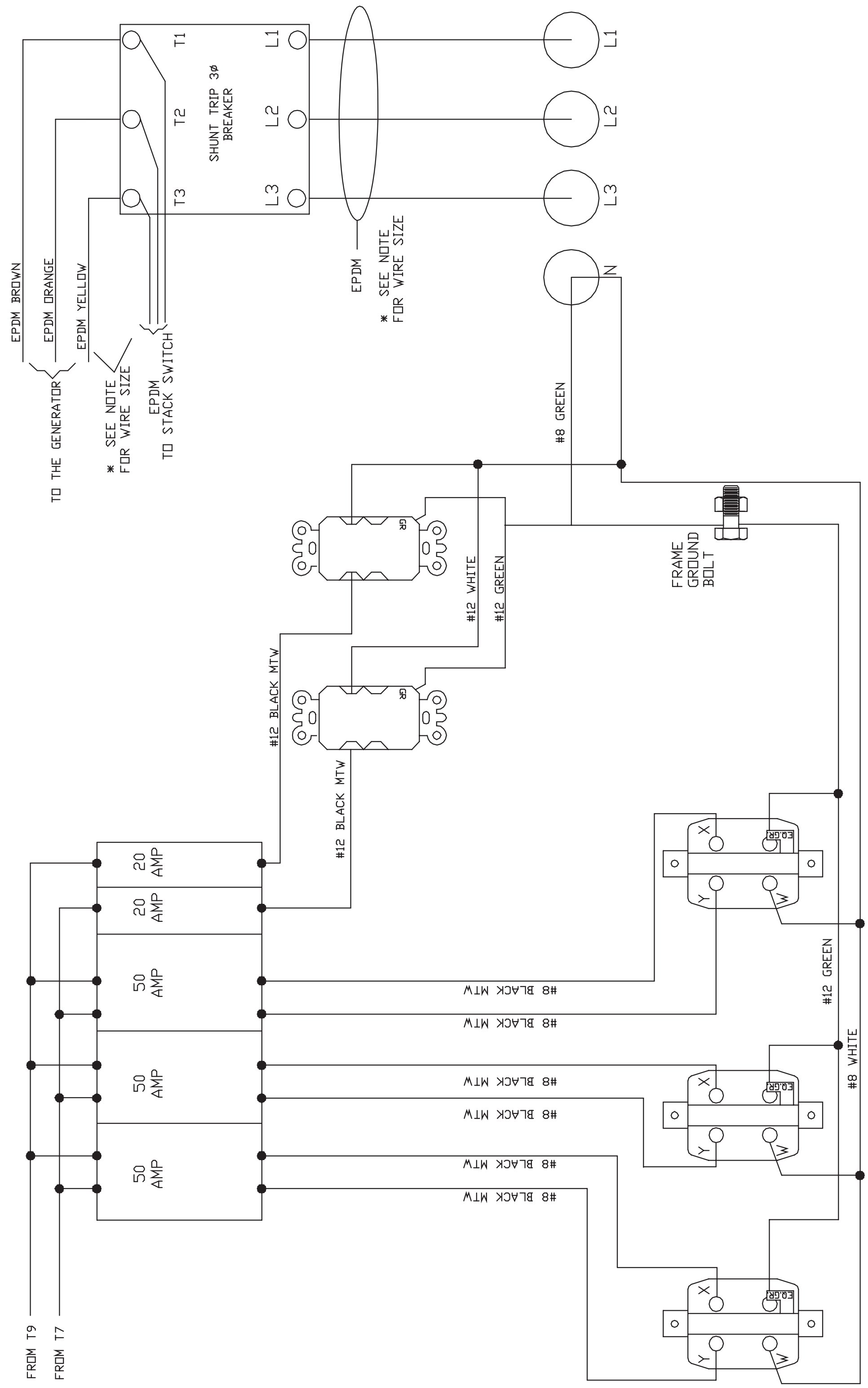


TEREX

Distribution Panel Wiring

REV A

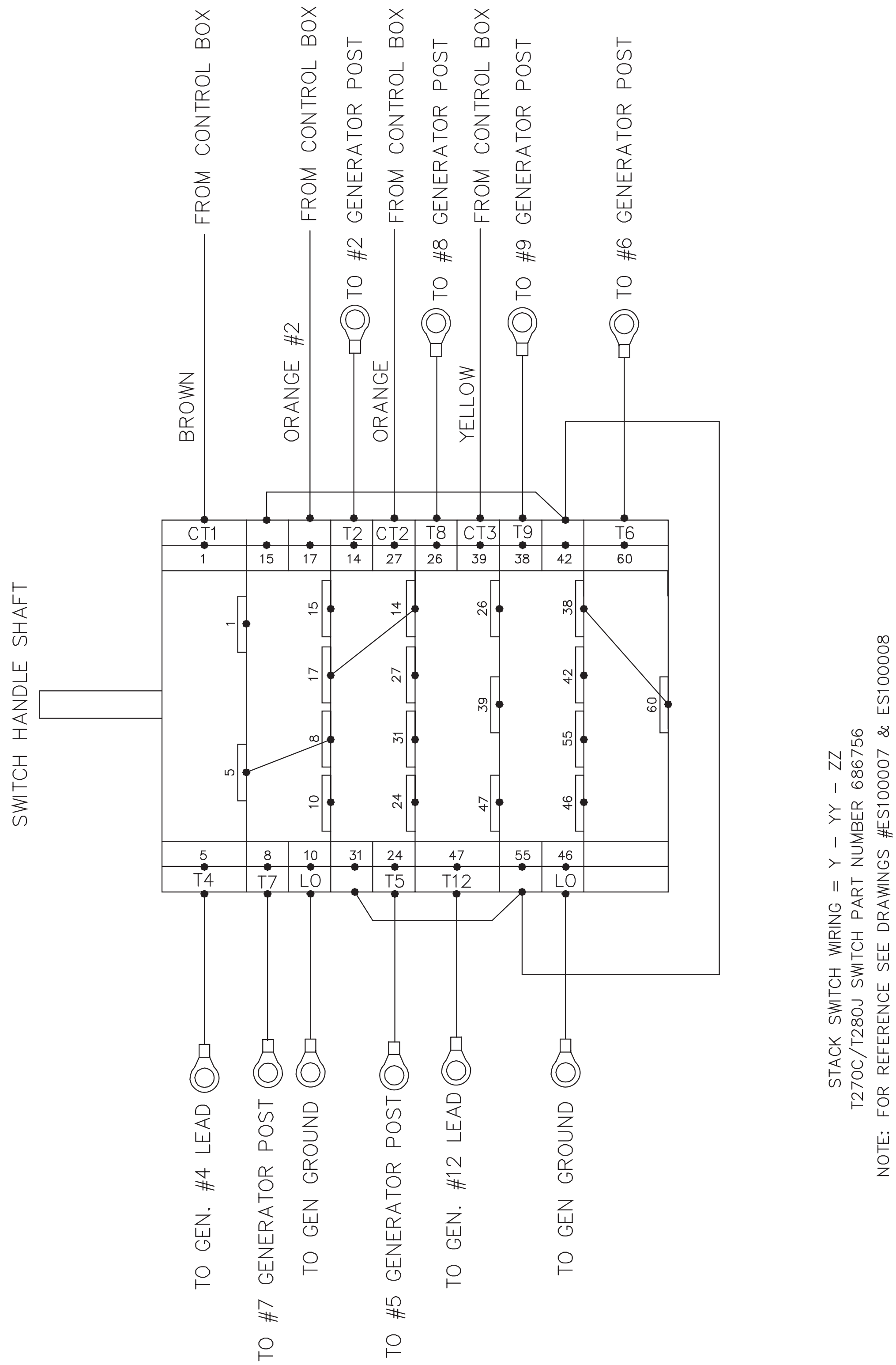
for T360 Series Single Phase Control
Drawing #ES100027



Three Position Stack Switch Wiring

Drawing #ES100026

REV A

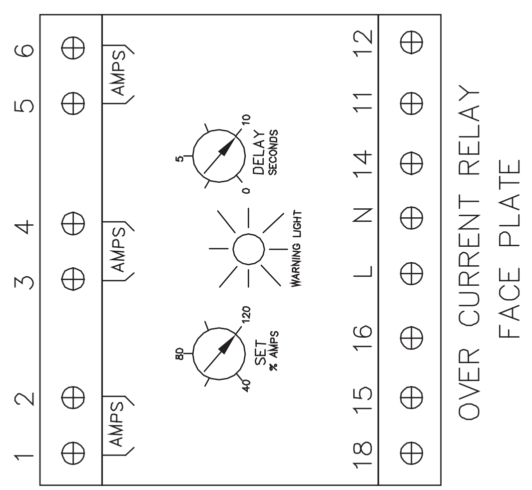


TEREX

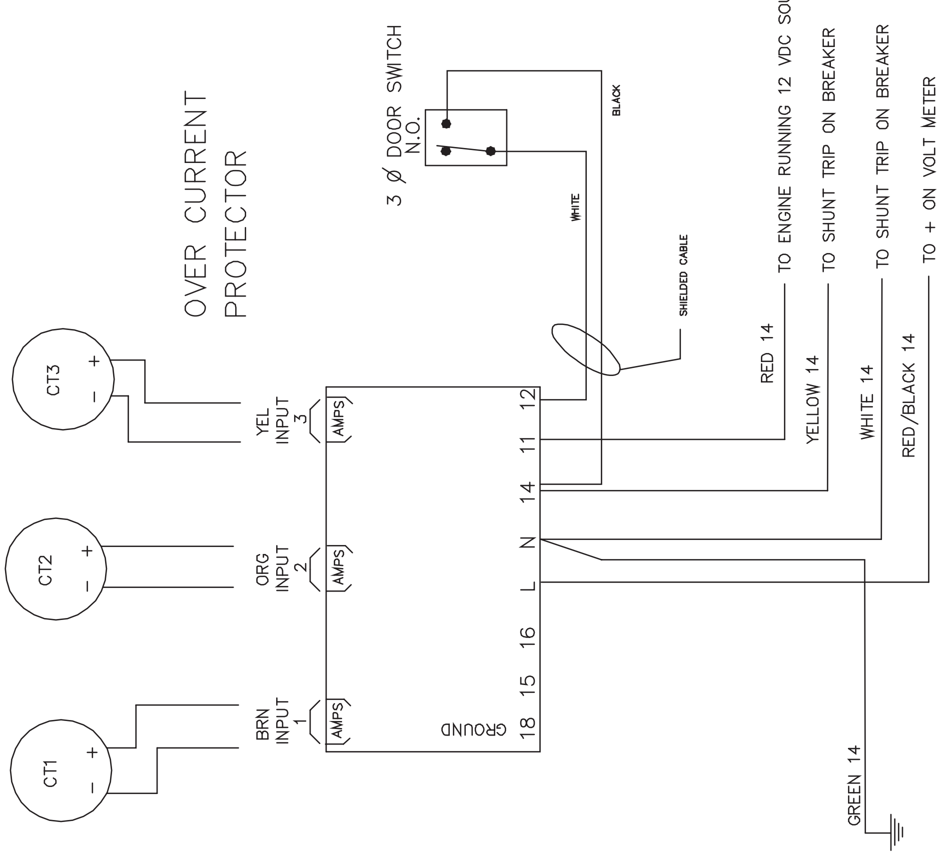
Overcurrent Relay Wiring

REV A

Drawing #ES100006



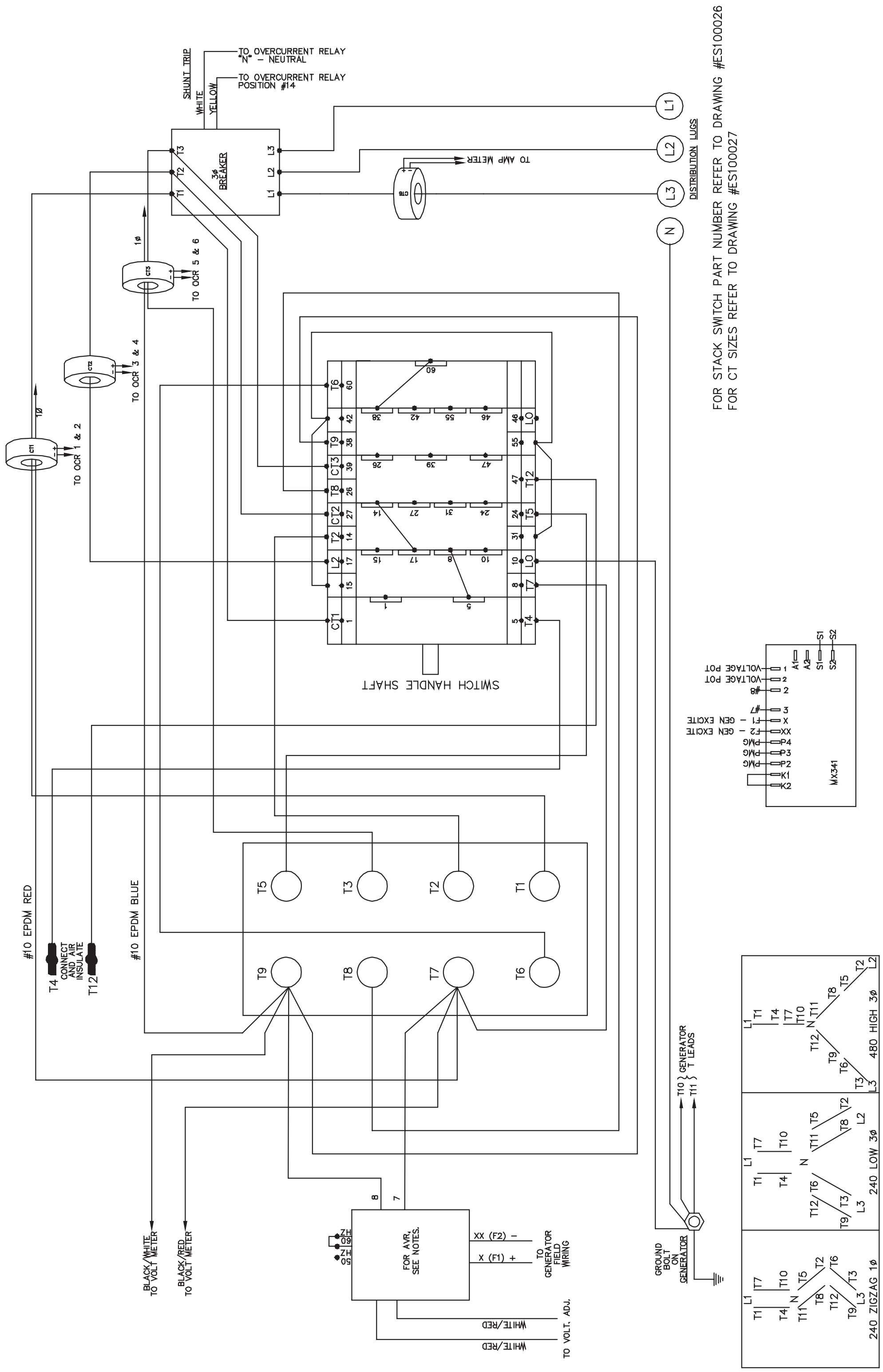
THE CT'S FOR EACH UNIT WITH THE OVERCURRENT RELAY ARE AS FOLLOWS:
T25I, T25G = (4) 100:5
T45I, T50(J,P) & T70(J,C,P) = (3) 100:5 & (1) 200:5
T90P & T120(C,P) = (3) 200:5 & (1) 400:5
T180C = (3) 400:5 & (1) 600:5
T270C = (3) 600:5 (1)1000:5
T360C = (3) 600:5 (1)1200:5



Standard Generator Wiring

for T360 Series
Drawing #ES100030

REV A

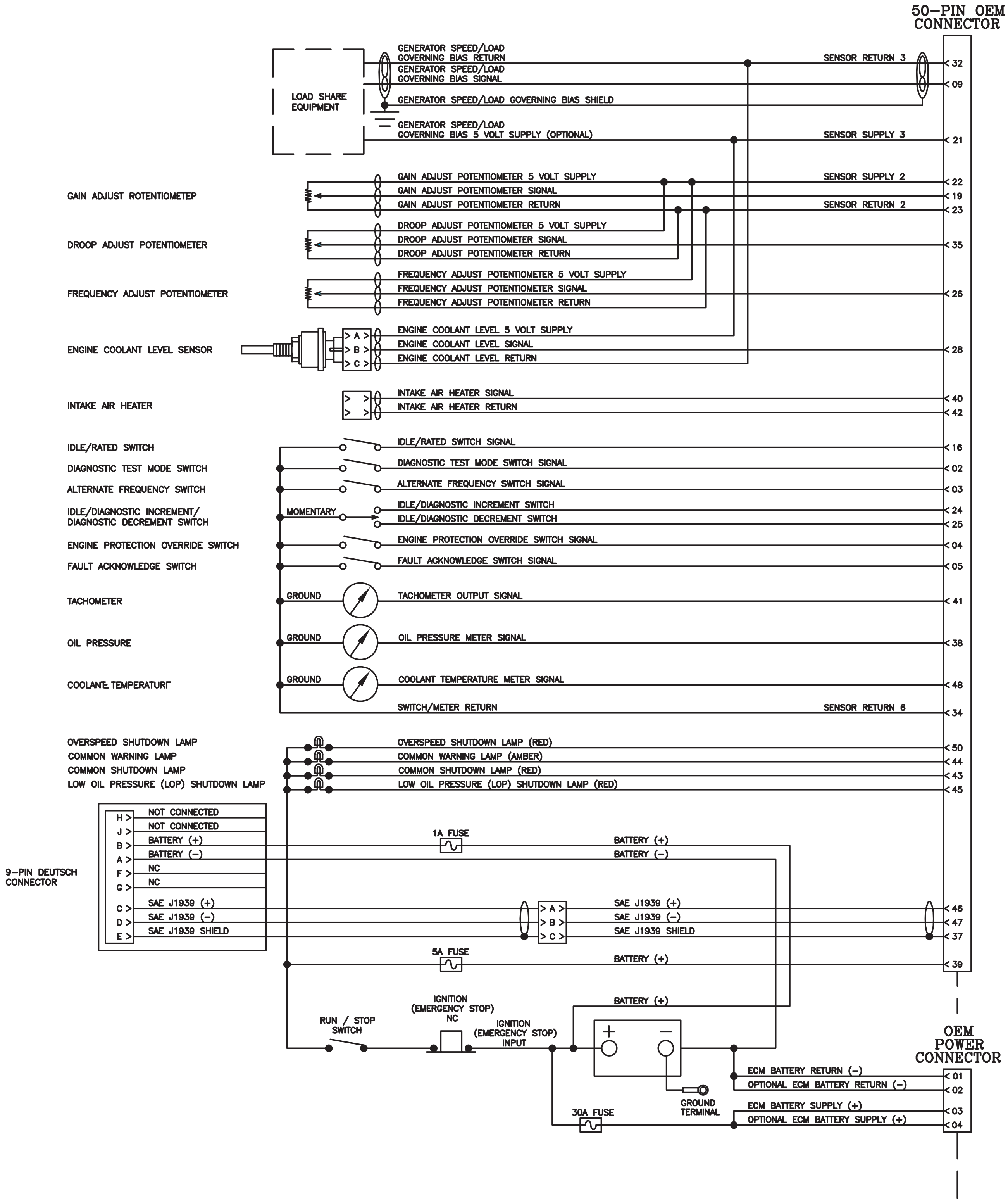


TEREX

Idle-Run Wiring (Cummins)

REV A

Drawing #ES100039



REV A

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TEREX

Section Six

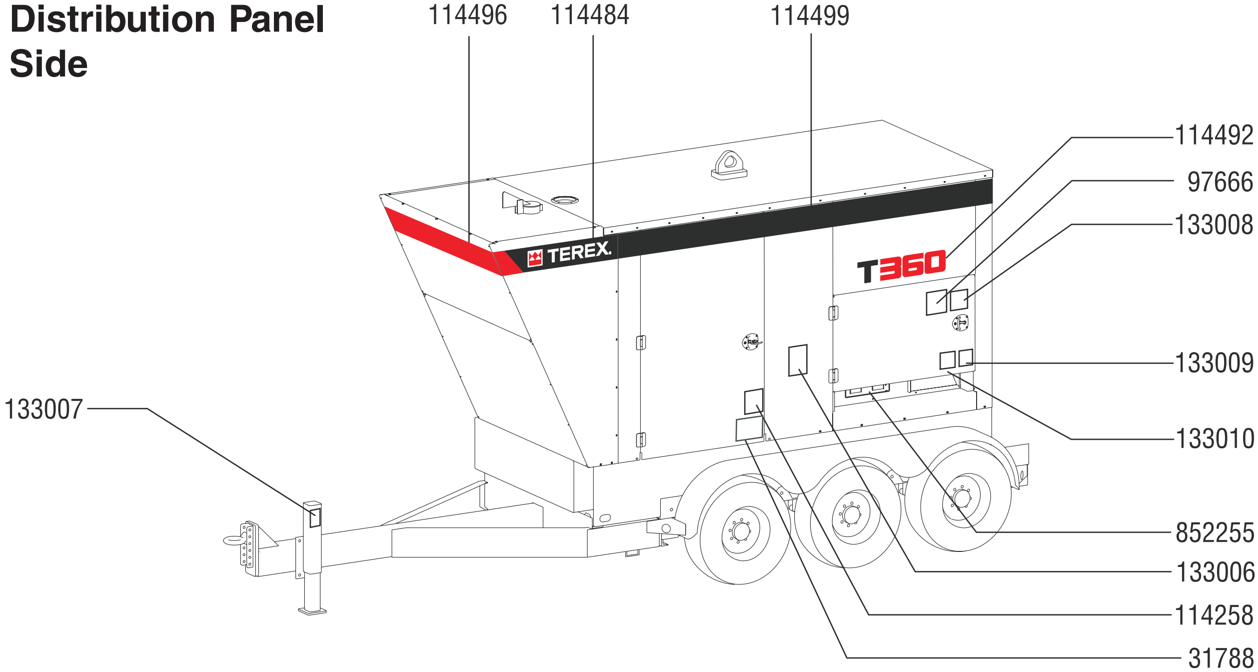
Decals

Figure 6-A

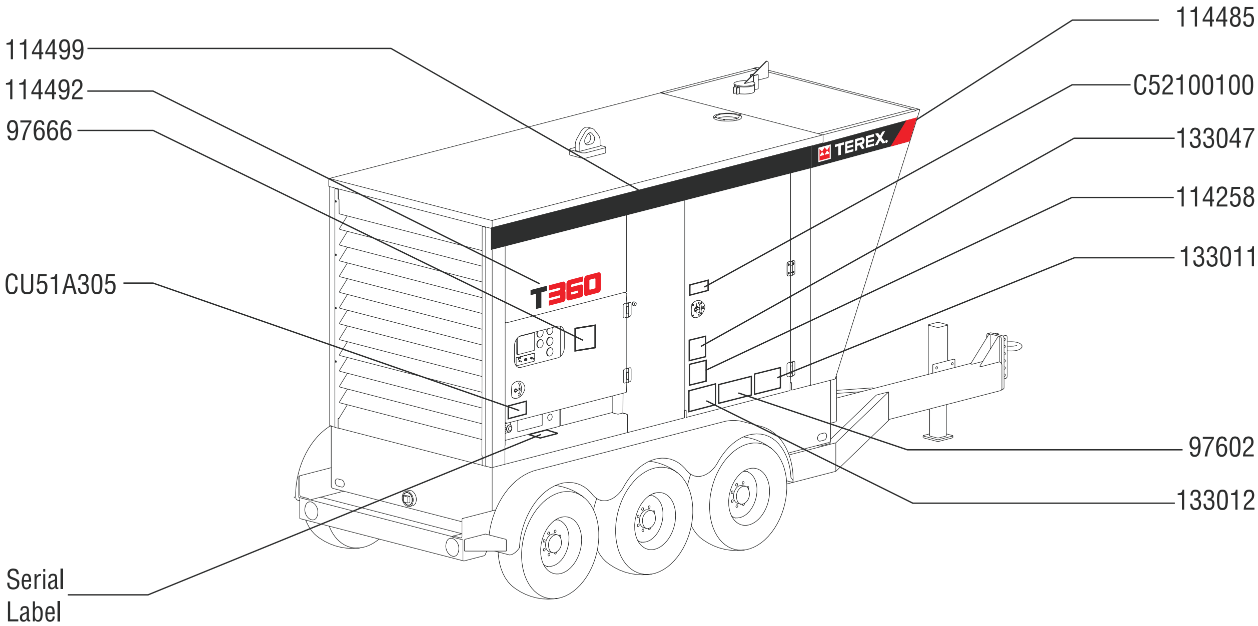
REV A

Decals

Distribution Panel Side



Control Panel Side



TEREX

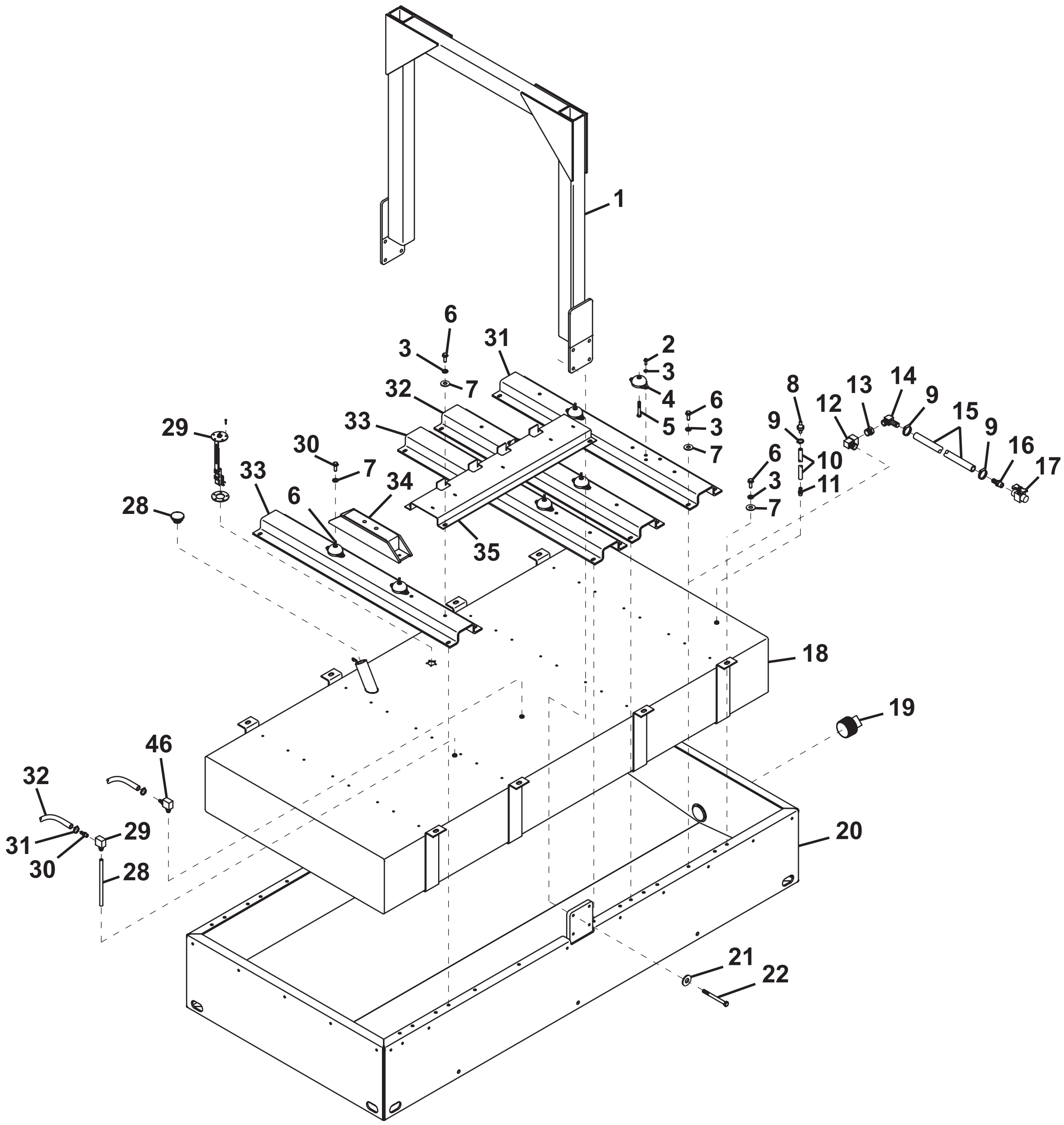
Section Seven

Base Components

Figure 7-A

REV A

Base Components



REV A

FIGURE 7-A

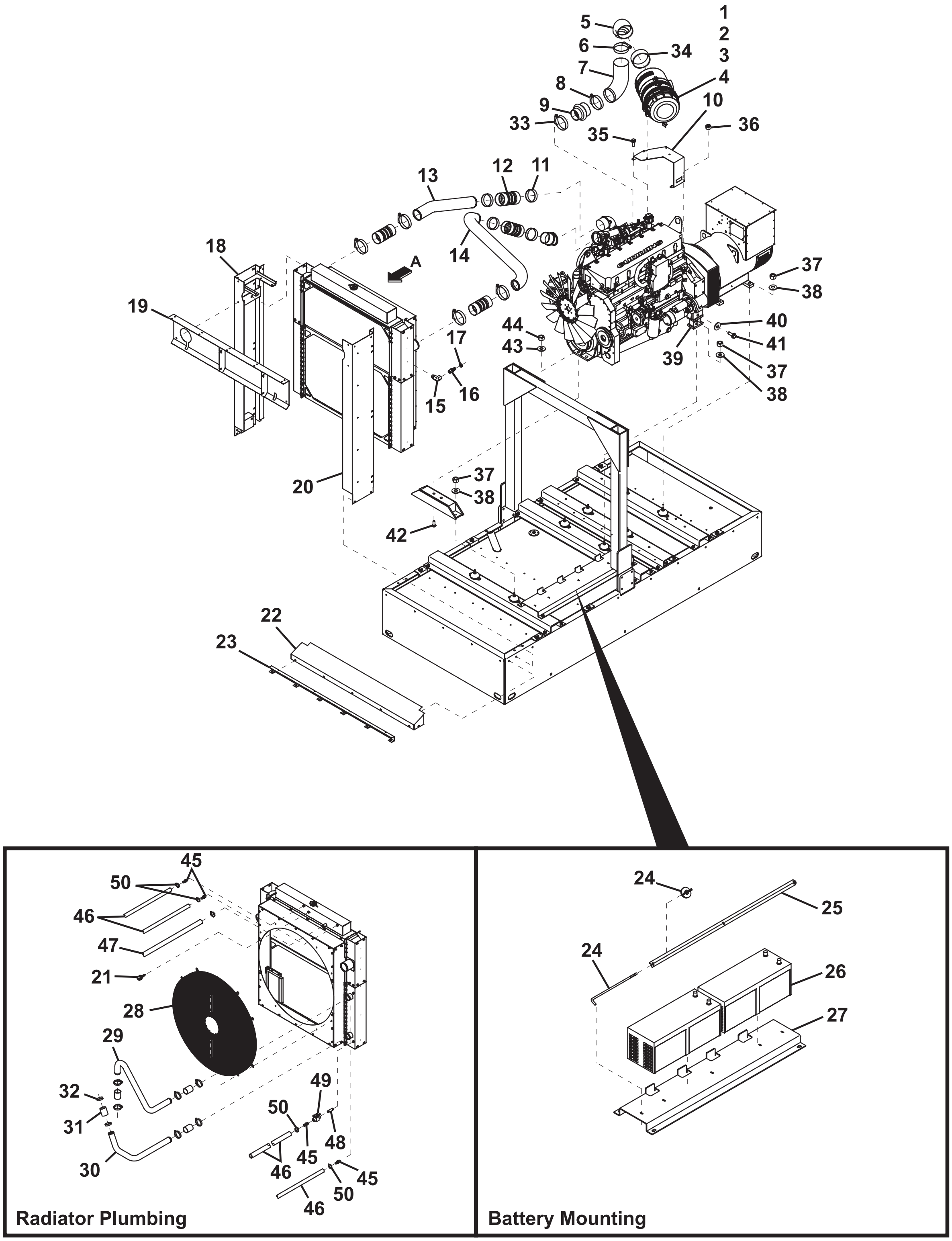
ITEM #	PART #	DESCRIPTION	QTY.
1	125190	WELDMENT, LIFTING HOOP	1
2	981635	SCREW, 1/2-13 NC X 1HHC, GR5, ZP	12
3	991650	WASHER, LOCK 1/2"	40
4	C33600300	MOUNT, VIBRATION, YELLOW	6
5	990820	SCREW, 1/2-13 NC X 2 HHC, GR 8, Y-ZINC	4
6	981660	SCREW, 1/2-13 NC X 1-1/2 HHC, GRADE 5, ZP	30
7	990210	WASHER, FLAT 1/2"	30
8	895371	VALVE VACCUUM RELIEF 1/4"	1
9	792750	CLAMP 7/16 TO 25/32 W/LINER	3
10	890796	HOSE, FUEL, 5/8", BLACK	4
11	C91001300	FITTING, BARB, 3/8" NPT 1/4" HB	1
12	892915	PIPE, ELBOW, STREET 90*, 1/2 M X F BRASS	1
13	C90700800	ADAPTER, 1/2"X1/4" REDUCER	1
14	C90200300	BARB, 3/8" X 1/4" NPT, 90 DEGREE	1
15	C91100700	HOSE, FUEL, 3/8"	4
16	C90200600	BARB, 3/8" X 1/4" NPT	1
17	C90800200	VALVE, NEEDLE, 1/4" FPT X 1/4" FPT	1
18	125064	TANK, FUEL, 428 GAL	1
19	C90900601	PLUG, PIPE, 3", SQUARE HEAD	1
20	125062	BASE, WELDMENT, 5OO GAL CONTAIN	1
21	993890	WASHER, LOCK 5/8"	8
22	C15309	SCREW, HEX CAP, 5/8-11" X 1.5", KEG Y ZINC, GR8	8
23	C91100300	NYLON TUBING - CUT TO PROPER LENGTH	2
24	C90200400	FITTING, PICKUP	1
25	C90200250	BARB, 1/4" MNPT 1/2" ID HOSE	1
26	C90101500	CLAMP, 11/16" X 1-1/4"	2
27	890787	HOSE, FUEL, 1/2" ID	12
28	796151	CAP, FUEL	1
29	C43200601	SENDER, FUEL LEVEL, VDO	1
30	990200	NUT, LOCK NYLON INSERT, 1/2-13NC, GR 2, ZPIN	2
31	125361	WELDMENT, GENERATOR MOUNT, FRONT	1
32	125362	WELDMENT, GENERATOR MOUNT, REAR	1
33	125360	WELDMENT, ENGINE MOUNT BEAM	2
34	125055	FRONT MOTOR MOUNT, CUMMINS QSM	1
35	125268	BATTERY SUPPORT FORMING	1
36	125436	HOSE END BARBED, 90 DEGREE	1

TEREX

Figure 7-B

REV A

Base Components



Radiator Plumbing

Battery Mounting

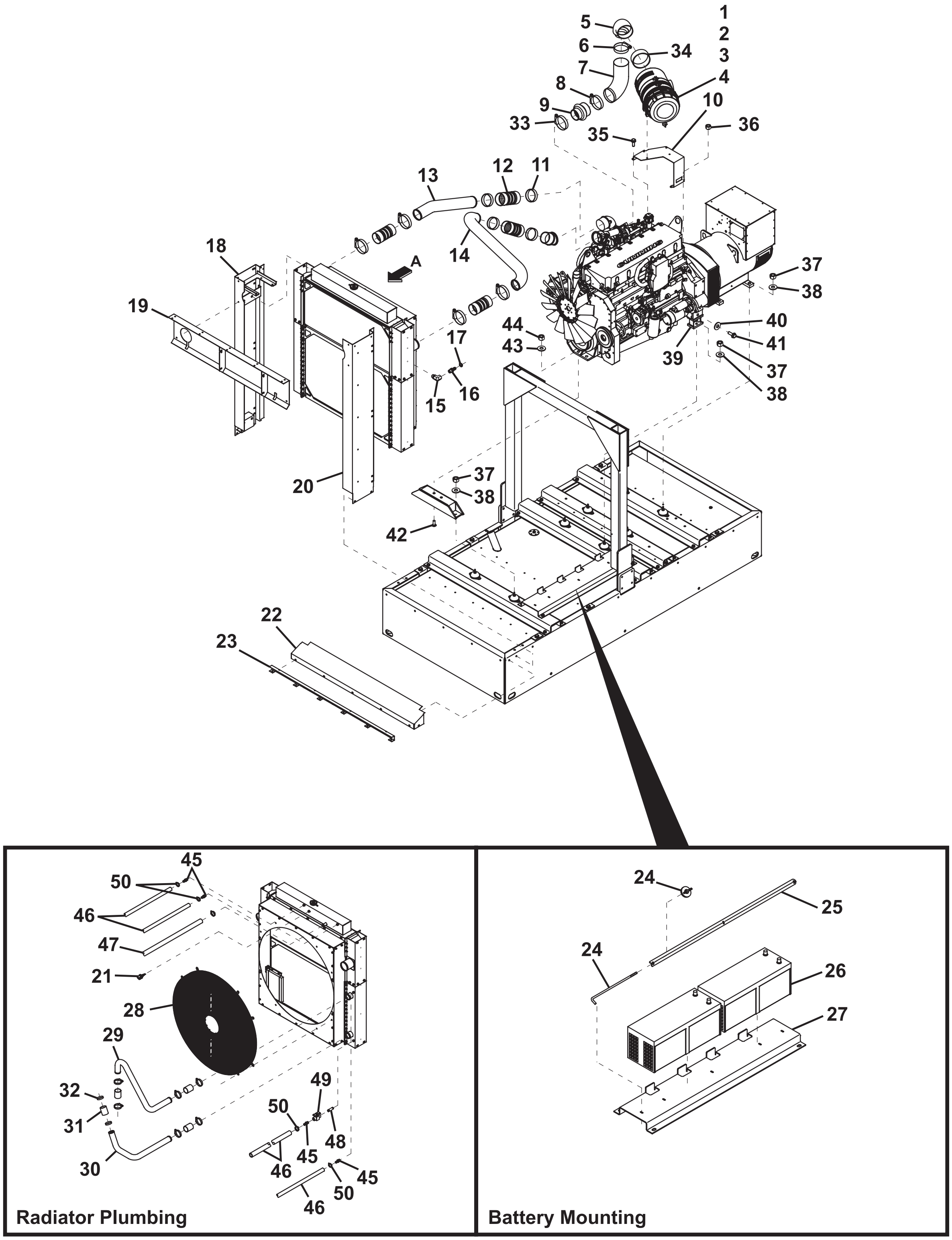
REV A FIGURE 7-B

ITEM #	PART #	DESCRIPTION	QTY.
1	125048	AIR CLEANER ASSEMBLY, DUAL ELEMENT, INCLUDES 2-4	1
2	125049	MOUNTING BAND, AIR CLEANER	2
3	125561	ELEMENT, PRIMARY	1
4	125562	ELEMENT, SECONDARY	1
5	125093	ELBOW, RUBBER, 90DEG, 7 X 6	1
6	125487	CLAMP	1
7	125036	PIPE, AIR INTAKE	1
8	125487	CLAMP	1
9	125092	HUMP HOSE, RUBBER, REDUCING 6 X 4	1
10	125060	AIR FILTER MOUNT-CUMMINS QSM11	1
11	C90107200	CLAMP	8
12	897925	HOSE, CAC, 4 ID X 8 LONG	4
13	125038	PIPE, TURBO OUTLET	1
14	125040	PIPE, CHARGE COOLER OUTLET	1
15	125434	ELBOW, 90D, 8 MALE,SAEX-8 FEMPIPE	2
16	125433	HOSE END, BARBED, RIGID, -8-8	2
17	C90101500	CLAMP, 11/16 X 1-1/4 W/LINER	2
18	125099	WELDMENT, FRONT CORNER, CONTROL SIDE	1
19	125172	WELDMENT, RADIATOR TOP	1
20	125167	WELDMENT, FRONT CORNER, DISTRIBUTION SIDE	1
21	C42208705	SWITCH/SENSOR, COOLANT LEVEL	1
22	125169	FORMING, RADIATOR BOTTOM	1
23	125377	FORMING, PLENUM DRAIN	1
24	C33700800	HOOK, BATTERY HOLD DOWN (PAIR)	2
25	125283	FORMING, BATTERY HOLDDOWN, 2 X 4D	1
26	125336	BATTERY, 12V, GROUP 4D, 1080 CCA, WET	2
27	125268	BATTERY SUPPORT FORMING	1
28	125563	FAN GUARD	1
29	125041	PIPE, COOLANT PRESSURE	1
30	125042	PIPE, COOLANT SUCTION	1
31	897923	HOSE, CAC, 2.5 ID X 3', LONG	4
32	C90106300	CLAMP	8
33	C90110200	CLAMP, T-BOLT, 4.25"	1
34	125488	CLAMP	1
35	C51601500	SCREW, 8MM X 20MM	2
36	C40162	NUT, FIN HEX M8-1.25 P	2
37	990200	NUT, LOCK NYLON INSERT, 1/2-13NC, GR 2, ZPIN	4
38	990210	WASHER , FLAT 1/2"	4
39	125177	REAR MOTOR MOUNT-CUMMINS QSM11	2
40	993890	WASHER, LOCK 5/8"	6
41	C15309	SCREW, HEX CAP, 5/8-11" X 1.5", KEG Y, ZINC, GR8	6
42	990250	SCREW, 3/4-10NC X 2HHC, GRADE 2, ZP	2
43	990260	WASHER, LOCK, 3/4"	2
44	990280	NUT, HEX 3/4-10NC, GRADE 2, ZP	2

Figure 7-B

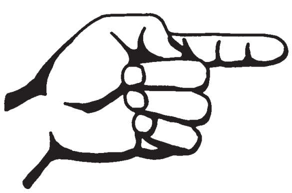
REV A

Base Components (cont.)



REV A FIGURE 7-B

ITEM #	PART #	DESCRIPTION	QTY.
45	C90200600	BARB, 3/8" X 1/4" NPT	4
46	C91100700	HOSE, FUEL, 3/8"	11
47	897922	HOSE, HEATER, SILICONE, 1"	5
48	C90400900	NIPPLE, PIPE, 1/4" X 1.5"	1
49	C90800200	VALVE, NEEDLE, 1/4" FPT X 1/4" FPT	1
50	792750	CLAMP, 7/16 TO 25/32	3



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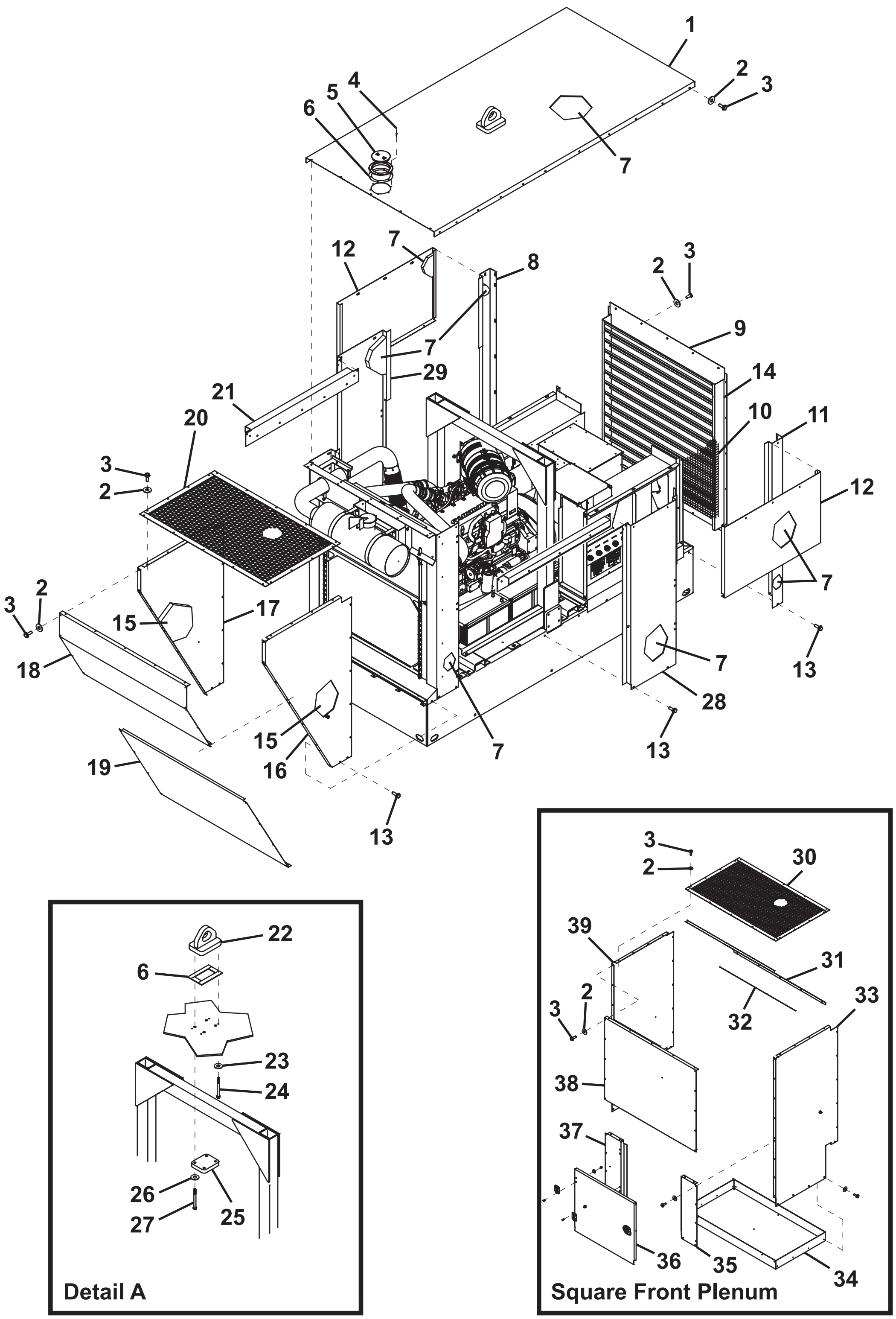
Section Eight

Cabinet Components

Figure 8-A

REV A

Cabinet Components - Panels



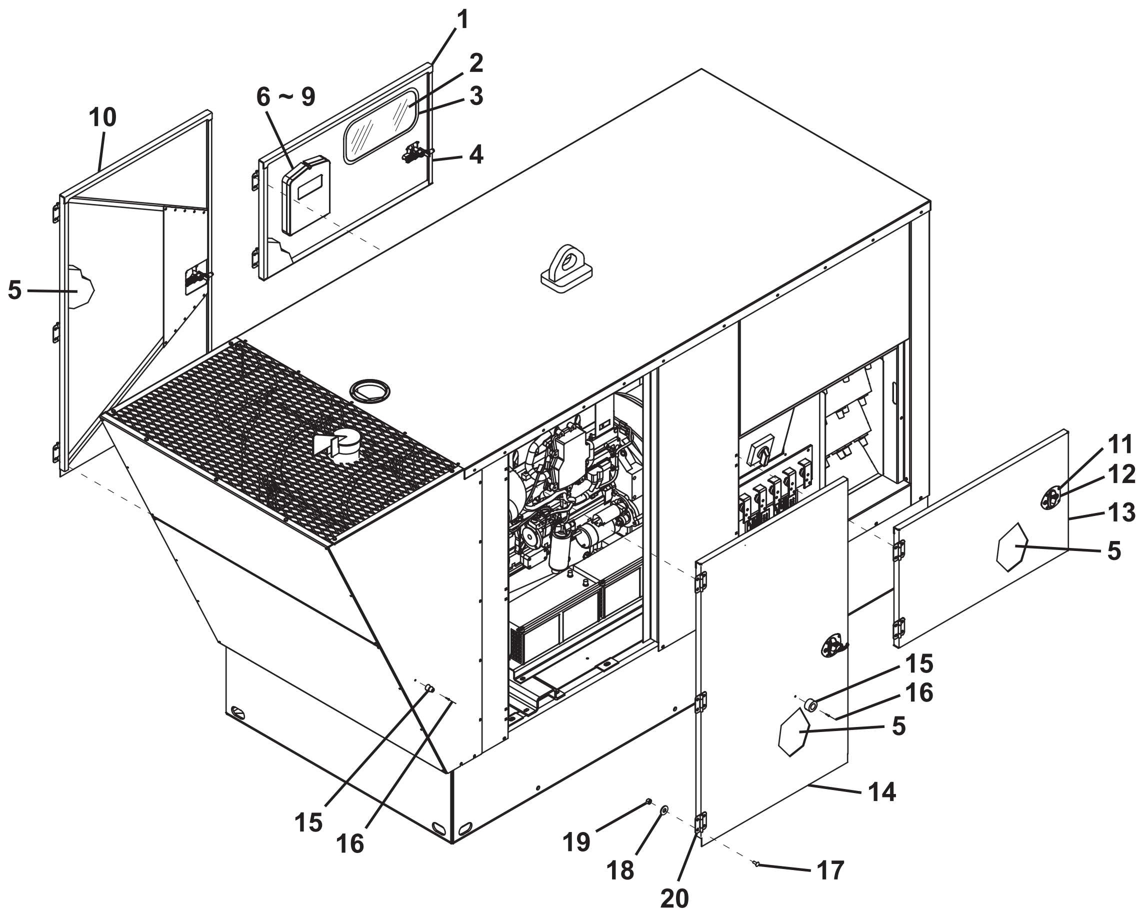
REV A FIGURE 8-A

ITEM #	PART #	DESCRIPTION	QTY.
1	125082	FORMING, ROOF TOP	1
2	993850	WASHER, FLAT 1/4, 5/8 S	94
3	993422	SCREW, FLANGE 1/4-20 X .75 STAIN STEEL	94
4	990670	RIVET, POP, 3/16 X 1/2, S/S, BLIND RIVET	6
5	669174	PLATE, DECK, SCREW-OUT	1
6	720440	WEATHERSTRIP, ADHESIVE 1/8 THICK X 1/2 WIDE	AR
7	C71100500	FOAM BLACK URETHANE 1"	AR
8	125176	WELDMENT, REAR CORNER, CONTROL SIDE	1
9	125079	WELDMENT, BACK LOUVER PANEL	1
10	125269	REAR LOUVER PANEL MESH	1
11	125178	WELDMENT, REAR CORNER, DISTRIBUTION SIDE	1
12	125179	WELDMENT, BOX TOP	2
13	C51601570	SCREW, FLANGE, 3/8" X 3/4", PATCH	25
14	C71100200	FOAM BLACK URETHANE 1/2"	AR
15	GUU401000	1.5" INSULATION MELAMINE FOIL BAKED	AR
16	125271	FORMING, PLENUM, DISTRIBUTION SIDE	1
17	125090	FORMING, PLENUM, CONTROL SIDE	1
18	125272	FORMING, PLENUM FRONT, TOP	1
19	125379	FORMING, PLENUM FRONT, BOTTOM	1
20	125443	WELDMENT, PLENUM TOP GRILL	1
21	125087	WELDMENT, TOP DOOR FRAME	2
22	125285	WELDMENT, LIFTING ATTACHMENT	1
23	993850	WASHER, FLAT 1/4, 5/8 S	4
24	993422	SCREW, FLANGE 1/4-20 X .75 STAIN STEEL	4
25	125286	PLATE, LIFT ATTACHMENT CLAMP	1
26	993830	WASHER, FLAT 5/8"	4
27	125430	SCREW, SHC, 5/8-11 X 7	4
28	125187	WELDMENT, DOOR POST, DISTRIBUTION SIDE	1
29	125186	WELDMENT, DOOR POST, CONTROL SIDE	1
30	125443	WELDMENT, PLENUM TOP GRILL	1
31	125548	PLENUM FRONT, INSIDE	1
32	125573	SQUARE PLENUM RADIATOR DOOR	1
33	125547	SQUARE PLENUM, DISTRIBUTION SIDE	1
34	125595	SQUARE PLENUM PAN	1
35	125597	SQUARE PLENUM LATCH POST	1
36	125603	SQUARE PLENUM DOOR	1
37	125596	SQUARE PLENUM DOOR POST	1
38	125674	FORMING, SQUARE PLENUM, FRONT	1
39	125546	SQUARE PLENUM, CONTROL SIDE	1

Figure 8-B

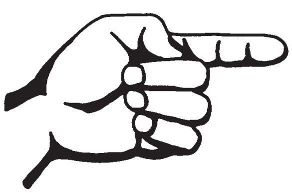
REV A

Cabinet Components - Doors



REV A FIGURE 8-B

ITEM #	PART #	DESCRIPTION	QTY.
1	GUU401100	TRIMLOCK SEAL 7/16"	AR
2	CU54T021	WINDOW, CONTROL DOOR	1
3	C74100100	GASKET, WINDOW, CONTROL DOOR	5
4	125084	FORMING, CONTROL PANEL DOOR	1
5	C71100500	FOAM BLACK URETHANE 1"	AR
6	24514	LITERATURE BOX	1
7	C71014	FLAT WASHER 11/16" OD	4
8	990150	NUT, LOCK NYLON INSERT, 1/4-20NC, GR 2, ZP	4
9	C74419	SCREW, CARRIAGE, 1/4-20 X .75 STAINLESS STEEL	4
10	125540	WELDMENT, ACCESS DOOR, RIGHT	1
11	990670	RIVET, POP 3/16 X 1/2, S/S BLIND RIVET	4
12	C51200000	LATCH, BLACK, KEY LOCK, ADJ T-HANDLE	4
13	125185	FORMING, DISTRIBUTION PANEL DOOR	1
14	125541	WELDMENT, ACCESS DOOR, LEFT	1
15	125483	STOP, DOOR, RUBBER W/WASHER	2
16	C41135000	RIVET, POP, 1/4" X 1/2"	2
17	C21353	CARRIAGE BOLT, 3/8-16 X 3/4	40
18	981120	WASHER, FLAT, 3/8	40
19	990170	NUT, LOCK NYLON INSERT 3/8-16NC, GR 2, ZPN	40
20	794890	HINGE, STAINLESS STEEL, BLACK COATED	10



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TEREX

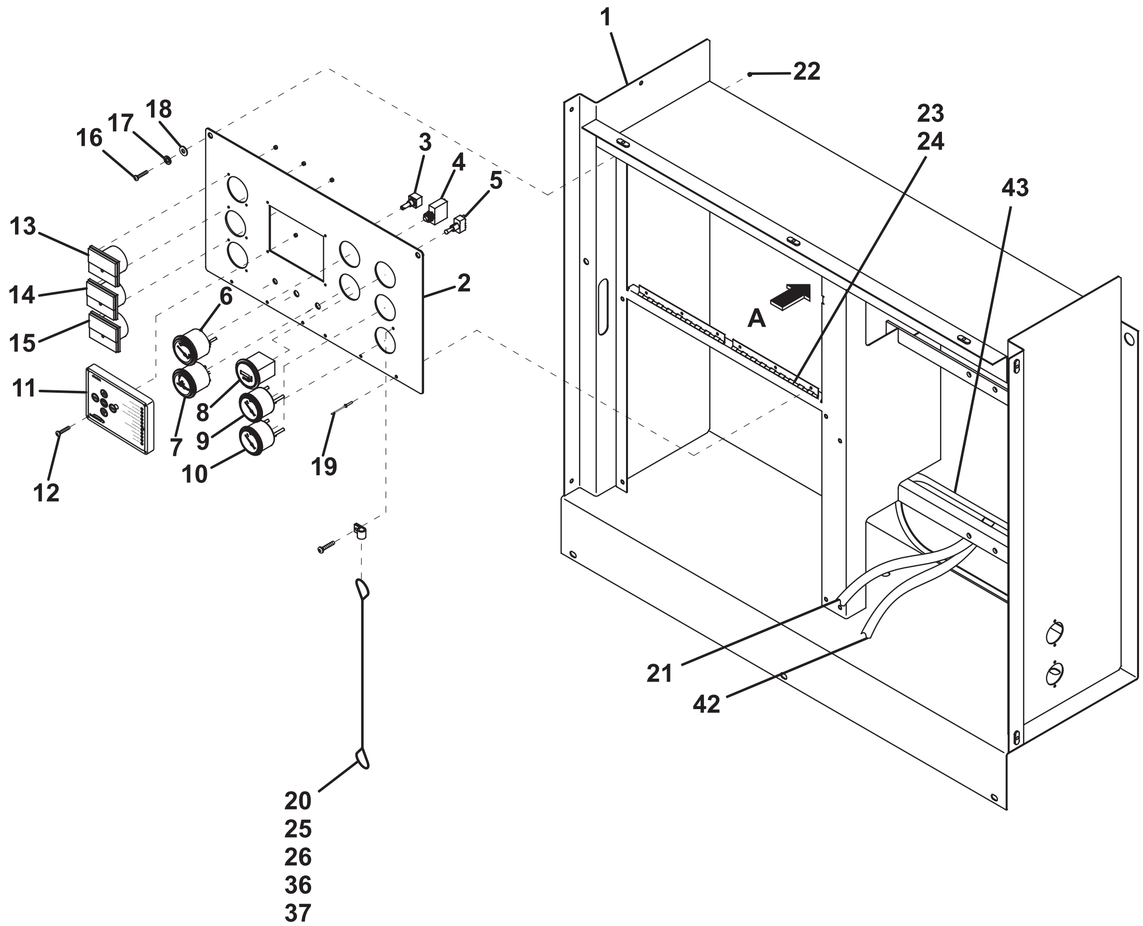
Section Nine

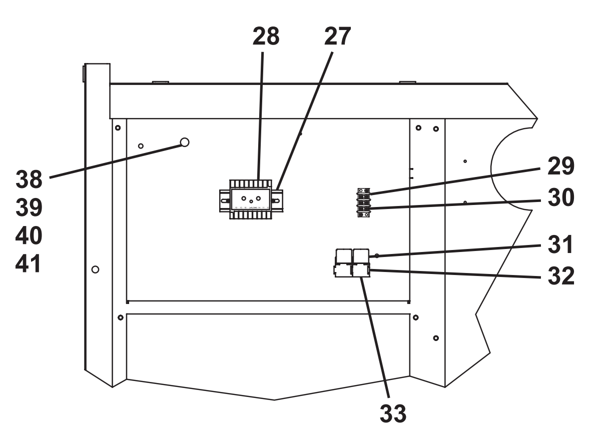
Control Box Components

Figure 9-A

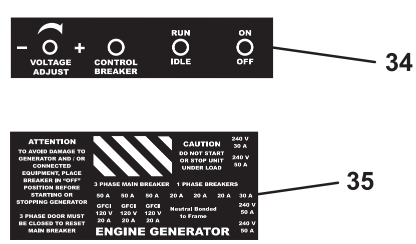
REV A

Control Panel - Upper T360





View A - T360 Control Panel



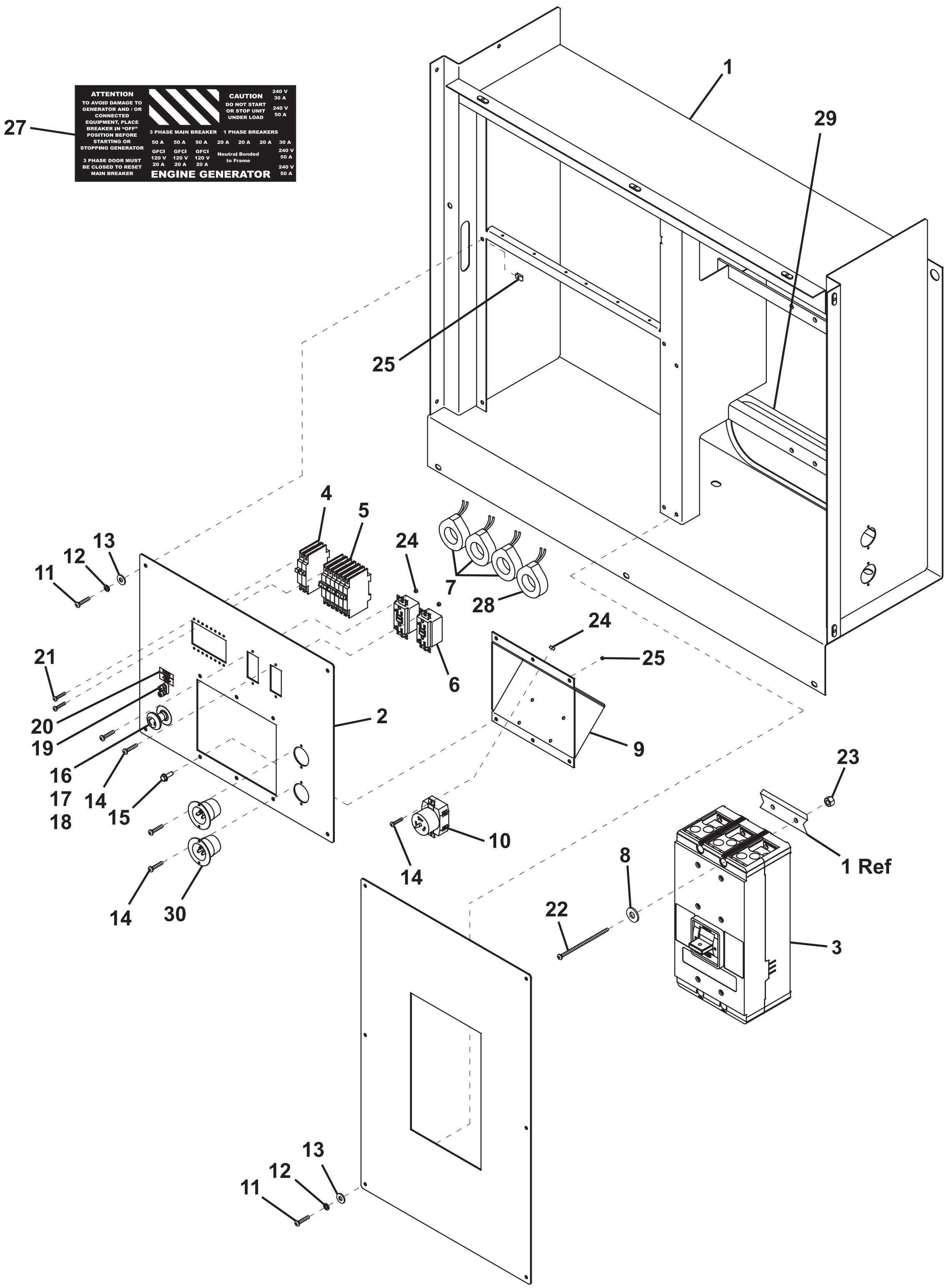
REV A FIGURE 9-A

ITEM #	PART #	DESCRIPTION	QTY.
1	125065	WELDMENT, CONTROL BOX	1
2	GCU300006	CONTROL PANEL, CASCADE	1
3	C42200500	POTENTIOMETER, VOLTAGE ADJUSTMENT	1
4	682070	BREAKER, MINI, 1P, 15A	1
5	C42208400	SWITCH, TOGGLE, SINGLE THROW	1
6	C43101600	GAUGE, DC, 24VOLT	1
7	C43200400	GAUGE, OIL PRESSURE	1
8	260360	HOURMETER, 12V DC	1
9	C43200300	GAUGE, WATER TEMP, 12V	1
10	C43200600	GAUGE, FUEL	1
11	261341	CASCADE CONTROLLER	1
12		INCLUDED IN ITEM 11	
13	C43100600	METER, VOLT	1
14	C43100400	METER, FREQUENCY	1
15	C43101400	METER, AMP, 0-1200	1
16	R980195	SCREW, 1/4-20NC X 3/4"	6
17	990400	WASHER, LOCK, 1/4"	6
18	981745	WASHER, FLAT, 1/4"	6
19	992040	RIVET, POP, 3/16 X .602	10
20	C51800100	LANYARD, NYLON	1
21	800008	HARNESS, AC GAUGES TO GENERATOR	1
22	C51600800	NUT, CLIP, 1/4"-20 X 3/4"	6
23	C51200201	HINGE, PIANO, 9", SS	2
24	CU43A050	PLASTIC 1/8" X 10.5" X 33"	1
25	C90103800	CLAMP, RUBBER COATED	1
26	C51601550	SCREW, SELF-TAPPING, #10	1
27	686735	RAIL, RELAY MOUNTING	1
28	C42401700	RELAY, OVER CURRENT	1
29	C42404000	TERMINAL STRIP, 6 POS	1
30	R660115	JUMPER TERMINAL STRIP	1
31	CDWV40150	RELAY, 50A, BOSCH	2
32	CDWV40151	RELAY BASE, 50A, BOSCH	2
33	CDWV40152	RELAY PIN	6
34	853838	DECAL: CONTROL PANEL, CASCADE	1
35	853813	DECAL: KIT-RECEPTACLES	1
36	R980900	NUT, LOCK NYLON INSERT #8-32NF 18-8 S/S	1
37	C54400100	SCREW, SET, 8-32X1/2"	1
38	990110	SCREW, 1/4-20NCX1, HHC GRADE 2 ZP	1
39	990150	NUT, LOCK NYLON INSERT, 1/4-20NC, GR 2, ZP	1
40	992120	NUT, HEX, 1/4-20NC, GRADE 2, ZP	1
41	996390	WASHER, LOCK STAR, 1/4" INT-EXT, ZP	1
42	800030	HARNESS, DC ENGINE, T360	1
43	C73000100	TRIM LOCK, 1/4"	AR

Figure 9-B

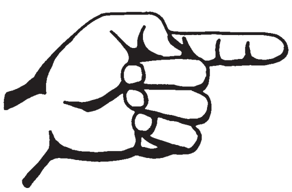
REV A

Control Panel - Lower T360



REV A FIGURE 9-B

ITEM #	PART #	DESCRIPTION	QTY.
1	125065	WELDMENT, CONTROL BOX	1
2	125273	PLATE, LOWER CONTROL PANEL	1
3	C42105500	BREAKER, 1200A, 3POLE	1
4	C42103400	BREAKER, 20A, 120/240V	2
5	C42103600	BREAKER, 50A, 120/240V	3
6	684640	RECEPTACLE, 20A, 120V, DUPLEX W/GFI	2
7	C42501100	TRANSFORMER, 600:5	3
8	981070	WASHER, FLAT 5/16"	4
9	CF41T031	TEMP POWER SLOPE	1
10	C47100300	RECEPTACLE, TWISTLOCK, 50A, 240V	3
11	R980195	SCREW, 1/4-20NC X 3/4"	8
12	990400	WASHER, LOCK, 1/4"	8
13	981745	WASHER, FLAT, 1/4"	8
14	C54400100	SCREW, SET, 8-32 X 1/2"	4
15	C51601442	SCREW, FLANGE, 1/4"-20	6
16	66812	E-STOP, PUSH BUTTON	1
17	66817	EMERGENCY STOP, BASE	1
18	686662	EMERGENCY STOP, FACE PLATE	1
19	671278	BINDING POST FOR REMOTE START	1
20	853752	DECAL: REMOTE START CN	1
21	C73716	SCREW, #6-32 X 1/2"	16
22	981205	SCREW, 5/16-18NC X 6-1/2 HHC, GR 5, ZP	4
23	991940	NUT, LOCK NYLON INSERT, 5/16-18NC, GR 2, ZP	4
24	R980900	NUT, LOCK NYLON INSERT, #8-32NF	10
25	C51600800	NUT, CLIP, 1/4"-20 X 3/4"	6
26	C51600800	NUT, CLIP, 1/4"-20 X 3/4"	16
27	853813	DECAL: KIT-RECEPTACLES	1
28	C42500600	TRANSFORMER, CURRENT, 1200:5	1
29	C73000100	TRIM LOCK, 1/4"	AR
30	682776	RECEPTACLE, 15A, OPTIONAL, NOT STANDARD	2



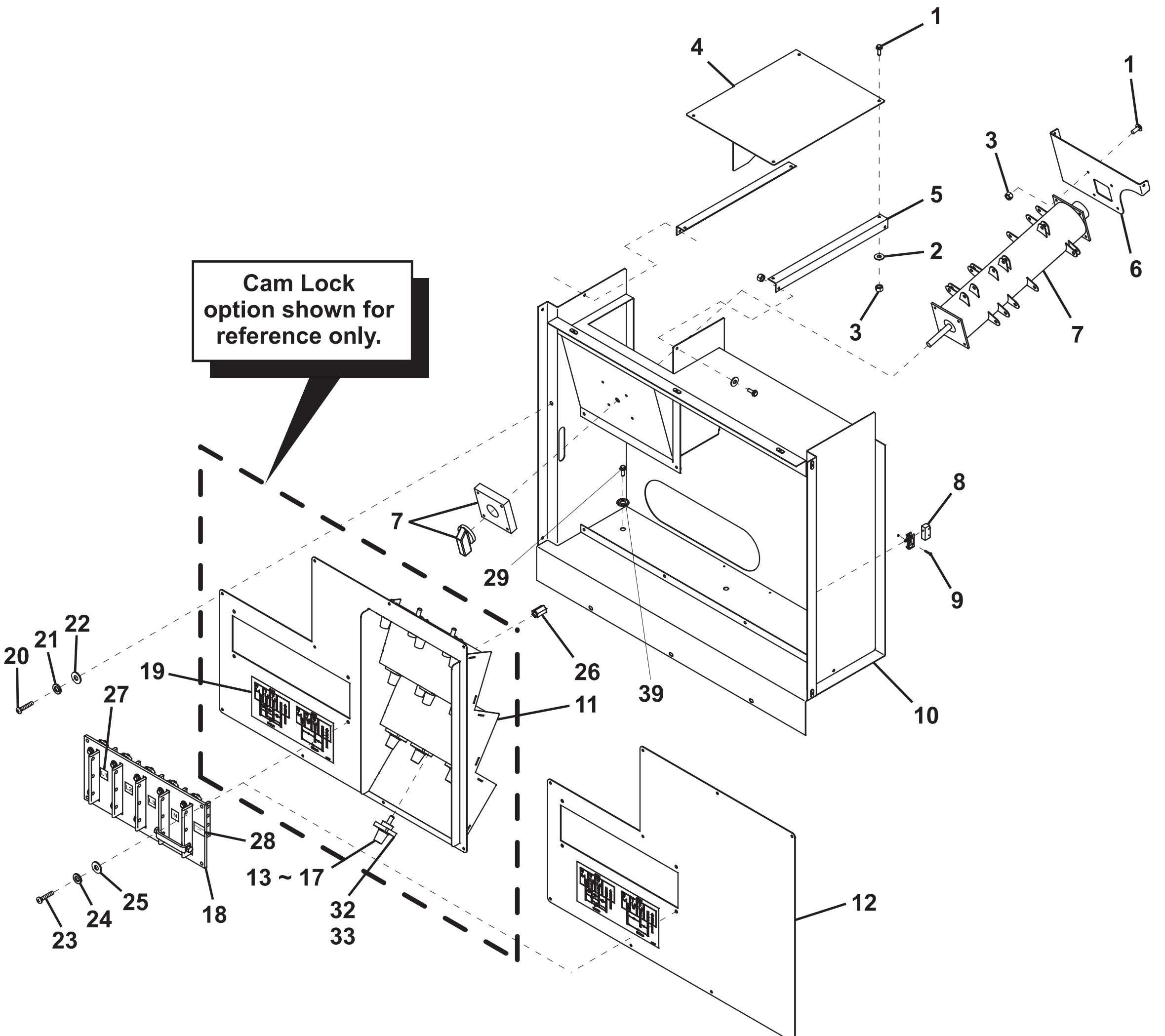
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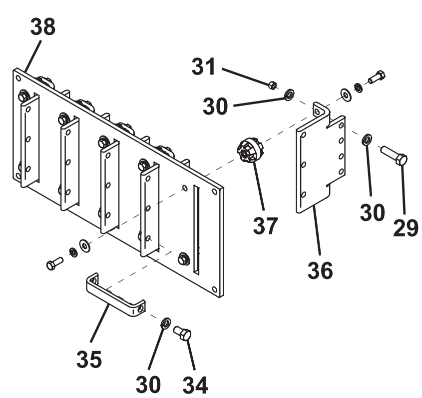
Distribution Panel

Figure 10-A

REV A

Distribution Panel





Detail of Buss Board item #18

REV A

FIGURE 10-A

ITEM #	PART #	DESCRIPTION	QTY.
1	993422	SCREW, FLANGE 1/4-20 X .75	8
2	993850	WASHER ,FLAT 1/4"	4
3	C51601441	NUT, FLANGE, 1/4"-20	8
4	125198	FORMING, COVER, STACK SWITCH	1
5	125265	FORMING, STACK SWITCH STRUT	2
6	125263	FORMING, STACK SWITCH REAR MOUNT	1
7	125058	SWITCH, STACK, 3POSITION	1
8	C42200701	SWITCH, SNAP-ACTION	1
9	C42200702	PLUNGER (ACTUATOR)	1
10	125075	WELDMENT, DISTRIBUTION BOX	1
11	125180	WELDMENT, CAM LOCK PANEL	1
12	125442	PANEL, DISTRIBUTION, J SERIES	1
13	C42501500	CONNECTOR, CAM-LOCK, WHITE	3
14	C42501600	CONNECTOR, CAM-LOCK, RED	3
15	C42501700	CONNECTOR, CAM-LOCK, BLUE	3
16	C42501800	CONNECTOR, CAM-LOCK, BLACK	3
17	C42501900	CONNECTOR, CAM-LOCK, GREEN	3
18	125421	DISTRIBUTION BOARD COMPLETE ASSEMBLY	1
19	852255	DECAL: 3PHASE DISTRIBUTION PANEL	1
20	R980195	SCREW, 1/4-20NC X 3/4 BUTTON HEAD,1 8-8 S/S	9
21	990400	WASHER, LOCK, 1/4"	9
22	C71014	WASHER, FLAT, 1/4"	9
23	C94903	SCREW, 3/8-16 X 1 1/4, Z	4
24	990470	WASHER, LOCK, 3/8"	4
25	R980015	WASHER, FLAT, 3/8"	4
26	981165	NUT, COUPLING, 3/8-16NC X 1-3/4 HEX, ZP	4
27	CU51A400	DECAL: L1, L2, L3, N	1
28	851820	DECAL: SYMBOL FOR GROUND	1
29	981660	SCREW, 1/2-13NC X 1-1/2 HHC, GRADE 5, ZP	23
30	C75240	WASHER, LOCK, 1/2"	45
31	C74967	HEX NUT, 1/2-13, SBZ	15
32	R980820	SCREW, #10-32NF X 7/8" LG	60
33	R980275	NUT, LOCK NYLON INSERT, #10-32NF,18-8 S/S	60
34	981635	SCREW, 1/2-13NC X 1HHC, GR5, ZP	20
35	125492	GROUND STRAP	1
36	125423	BUSS BAR	5
37	125565	STANDOFF ISOLATOR	10
38	125422	DISTRIBUTION BOARD ONLY	1
39	995970	WASHER, LOCK STAR, 1/2 EXT.TOOTH, S/S	3

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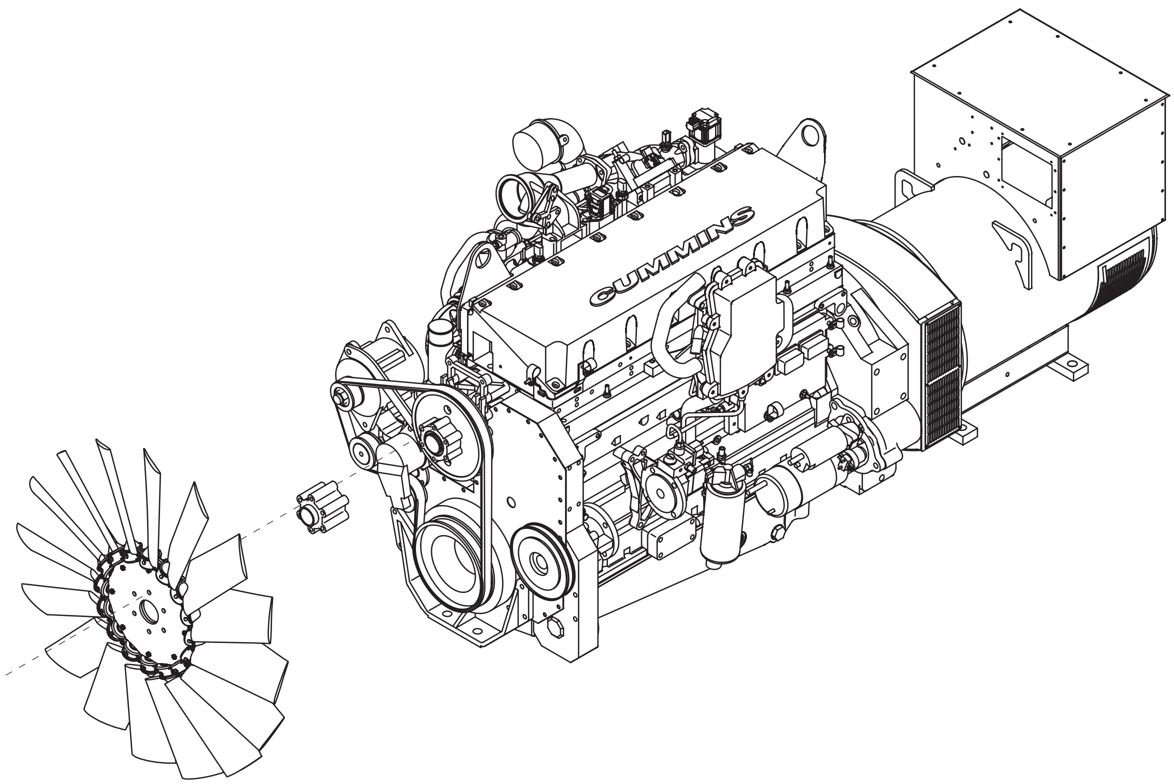
Section Eleven

Engine & Genset Components

Figure 11-A

REV A

Engine Genset Assembly - Cummins



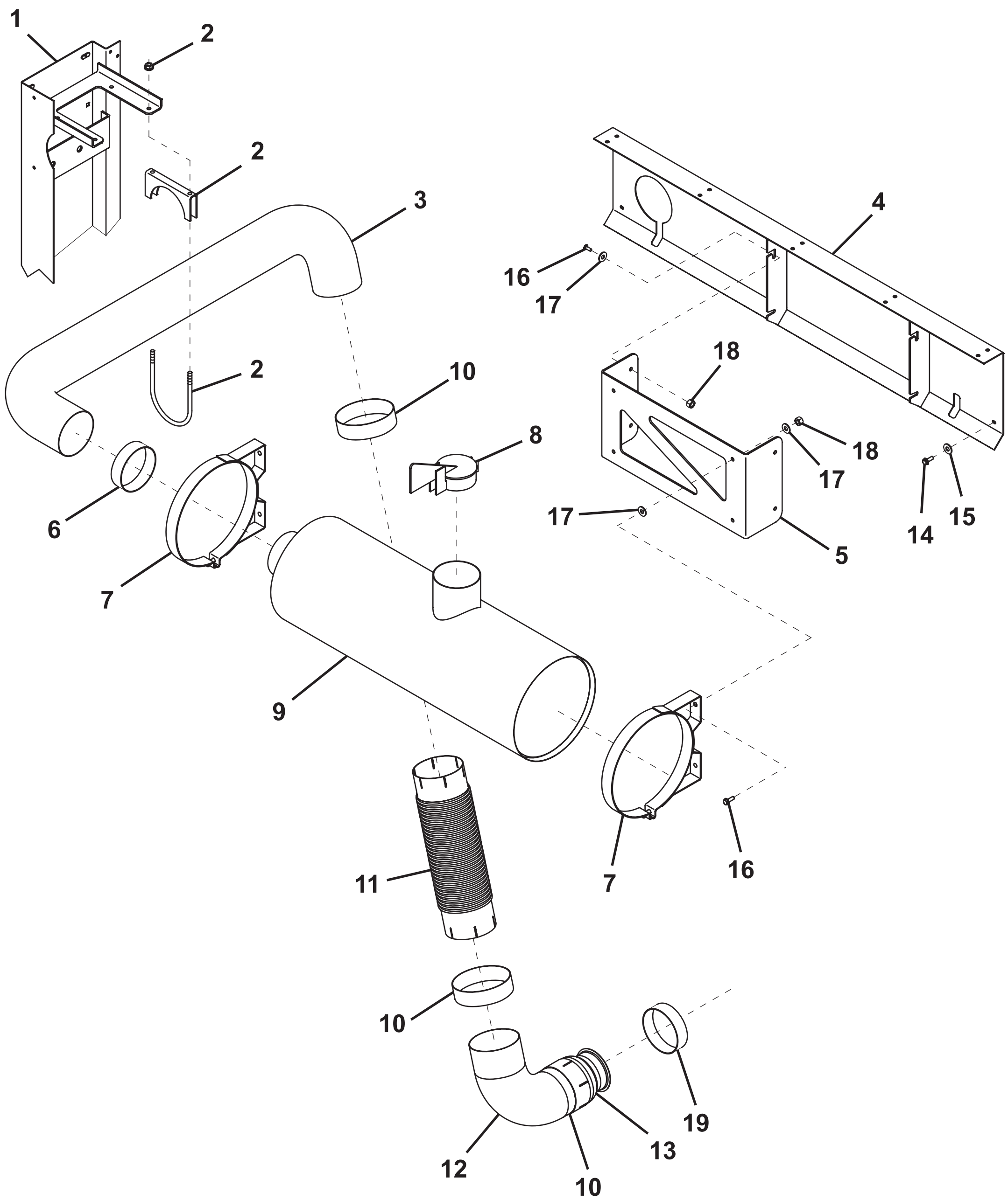
REV A FIGURE 11-A

ITEM #	PART #	DESCRIPTION	QTY.
1	125045	GENERATOR, NEWAGE, HCI434E1L80D	1
2	CMX341	MX341, AUTOMATIC VOLTAGE REGULATOR	1
3	125560	RECTIFIER SERVICE KIT,W/FWD & REV DIODES, VARISTOR	1
4	836428	PMG KIT, INCLUDES, STATOR, ROTOR, HARDWARE,COVER	1
5	836430	OPERATION MANUAL, HCI MODEL	1
6	125025	ENGINE, CUMMINS, QSM11	1
7	125550	OIL FILTER	1
8	125551	FUEL FILTER	1
9	125557	WATER SEPARATOR	1
10	125552	BELT	1
11	125553	BELT TENSIONER	1
12	125554	STARTER	1
13	125555	WATER PUMP	1
14	125556	THERMOSTAT	1
15	125564	ALTERNATOR	1
16	125558	OPERATION MANUAL	1
17	125559	DIPSTICK	1
18	125427	QUICK COUPLING, OIL DRAIN, MALE 1-18 UNS	1
19	125031	FAN	1
20	125526	HOSE END, BARBED, STRAIGHT, FUEL P.U., WATER SEP.	1
21	49217	HOSE END, BARBED, 90 DEG, FUEL RETURN	1
22	C42300400	SENDER, OIL PRESSURE, VDO	1
23	839097	OIL PRESSURE SENSOR	1
24	C42300500	SWITCH, WATER TEMP, SD, DOUBLE PRONG	1

Figure 11-B

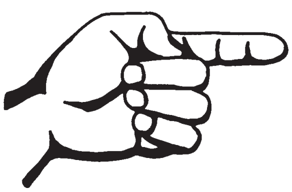
REV A

Engine Muffler Assembly - Cummins



REV A FIGURE 11-B

ITEM #	PART #	DESCRIPTION	QTY.
1	125099	WELDMENT, FRONT CORNER, CONTROL SIDE	1
2	C90103000	CLAMP, U-BOLT, 5"	2
3	125037	PIPE, EXHAUST	1
4	125172	WELDMENT, RADIATOR TOP	1
5	125094	FORMING, MUFFLER MOUNT	1
6	125030	WIDE CLAMP, TORCTITE	1
7	125047	MUFFLER CLAMP	2
8	C33503403	RAIN CAP	1
9	125046	MUFFLER, T360	1
10	125051	CLAMP, ACCUSEAL, 5"	3
11	125053	FLEX CONNECTOR, 5" ID/ID, 18"LG	1
12	125052	ELBOW, EXHAUST, 90DEG 5"	1
13	125254	EXHAUST, CONNECTOR, FLARED, 4" TO 5" OD	1
14	993422	SCREW, FLANGE 1/4-20 X .75	4
15	993850	WASHER, FLAT 1/4"	4
16	981460	SCREW, 3/8-16NC X 1-1/4"	8
17	990080	WASHER, FLAT 3/8"	16
18	990170	NUT, LOCK NYLON INSERT, 3/8-16NC, GR 2, ZPN	8
19	125050	CLAMP, V-BAND	1



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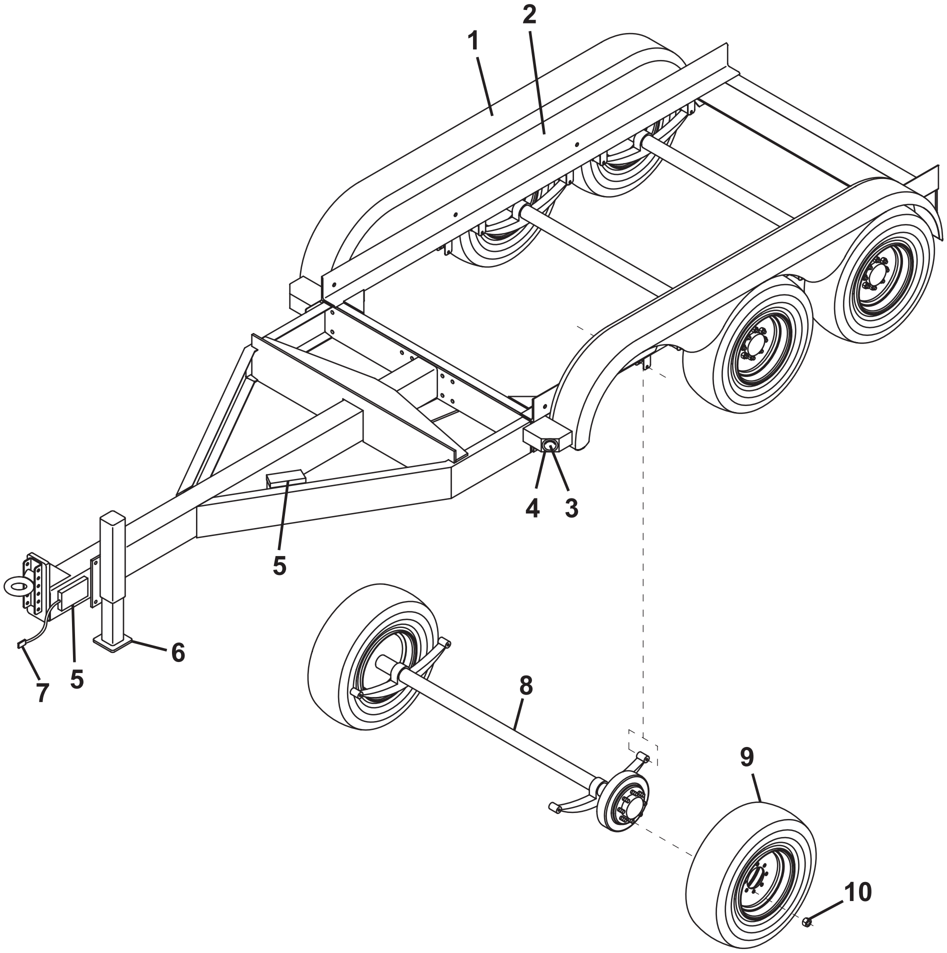
Section Twelve

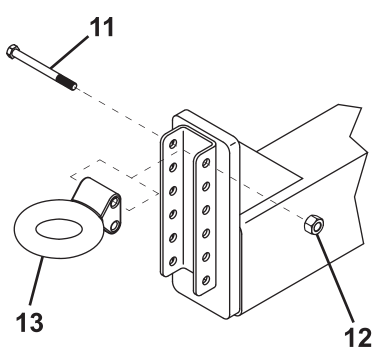
Trailer Components

Figure 12-A

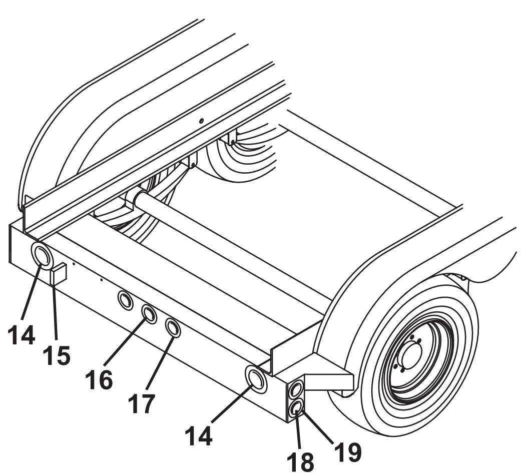
REV A

Trailer Components





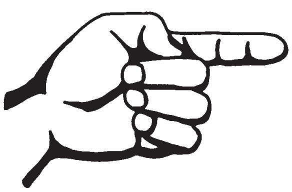
Trailer Hitch Mounting



Trailer Lights - Rear View

REV A FIGURE 12-A

ITEM #	PART #	DESCRIPTION	QTY.
1	134011	TRAILER, TANDEM TEARDROP FENDER	2
2	134012	TRAILER, FENDER BACK	2
3	834232	CLEARANCE LIGHT MOUNT KIT	2
4	834221	AMBER CLEARANCE LIGHT	2
5	134013	TRAILER, ELECTRIC BREAKAWAY BOX WITH SWITCH	1
6	841082	JACK, 10K LBS.	1
7	834214	CONNECTOR, 6 PIN	1
8	134014	TRAILER, ELECTRIC AXLE COMPLETE	3
9	841885	TIRE & WHEEL MOUNTED, 235/85R16, 8 BOLT,LOAD E	6
10	840396	LUG NUT	48
11	834213	BOLT FOR PINTLE EYE	2
12	834215	NUT FOR PINTLE EYE	2
13	834216	TOW RING, 3", PINTLE EYE	1
14	834234	STOP, TAIL LIGHT, W/GROMMETT & PLUG	2
15	834236	TAG LIGHT KIT	1
16	834233	2.5" RED CLEARANCE LIGHT	3
17	834232	CLEARANCE LIGHT MOUNT KIT	3
18	134015	TRAILER, 2" RED CLEARANCE LIGHT	4
19	134016	TRAILER, 2" CLEARANCE LIGHT MOUNT KIT	4



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